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163

Vol. III

TRANSCRIPT OF RECORD

Supreme Court of the United States

OCTOBER TERM, 1942

No. 299

JERSEY CENTRAL POWER & LIGHT COMPANY,
PETITIONER,

vs.

FEDERAL POWER COMMISSION

No. 329

NEW JERSEY POWER & LIGHT COMPANY,
PETITIONER,

vs.

FEDERAL POWER COMMISSION

ON WRITS OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE THIRD CIRCUIT

PETITIONS FOR CERTIORARI FILED {AUGUST 13, 1942.
AUGUST 22, 1942.

CERTIORARI GRANTED OCTOBER 12, 1942.

TRANSCRIPT OF RECORD
VOLUME III.

IN THE
United States Circuit Court of Appeals
For the Third Circuit

No. 7256 October Term, 1939

JERSEY CENTRAL POWER & LIGHT COMPANY
Petitioner

v.

FEDERAL POWER COMMISSION
Respondent

No. 7257 October Term, 1939

NEW JERSEY POWER & LIGHT COMPANY
Petitioner

v.

FEDERAL POWER COMMISSION
Respondent

PETITIONS FOR REVIEW FROM AN ORDER OF THE FEDERAL POWER COMMISSION

Original Transcript of Record Filed December 29, 1939

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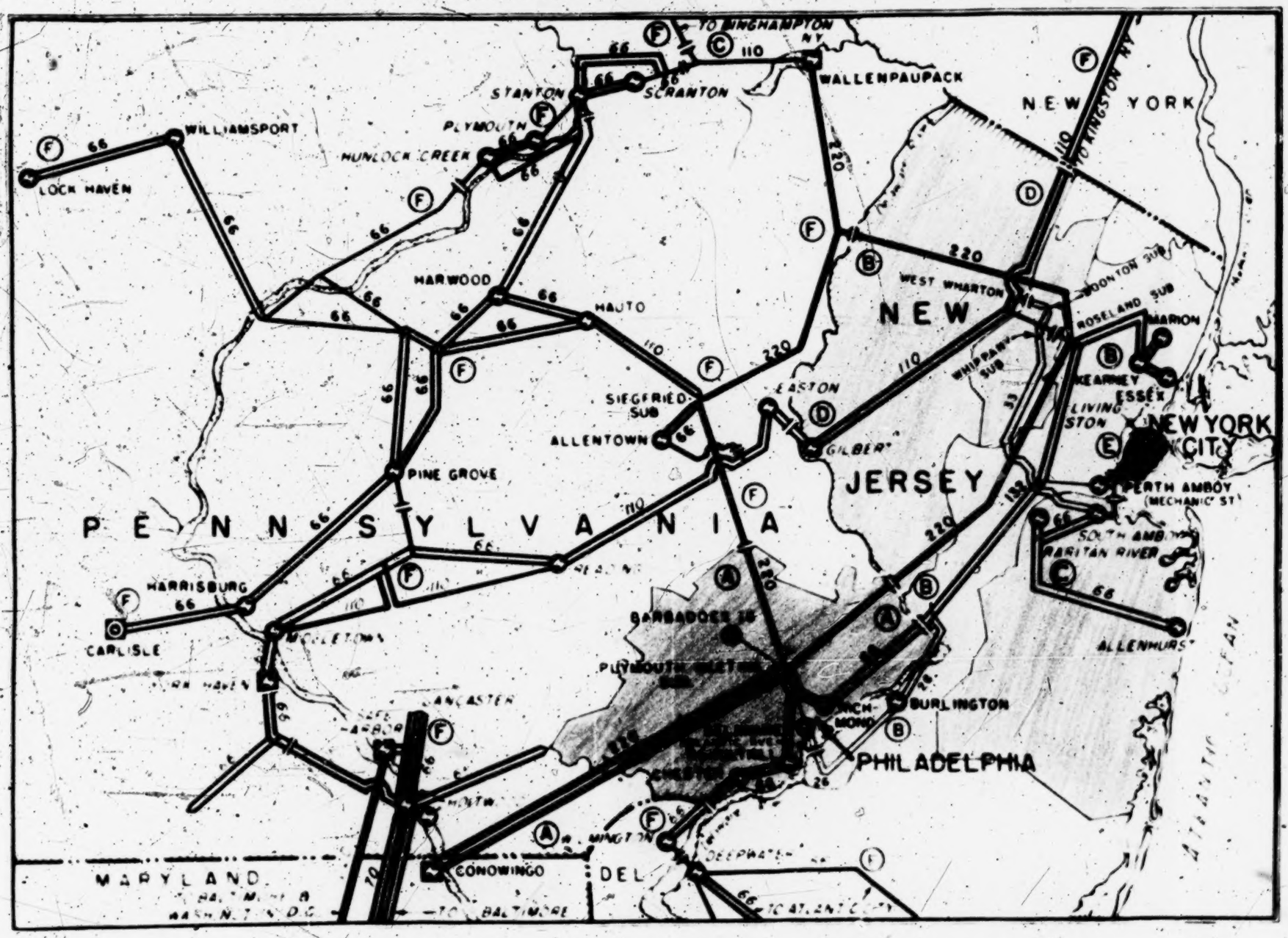
BUREAU OF ENGINEERING
DIVISION OF POWER RESOURCES AND REQUIREMENTS

FEDERAL POWER COMMISSION
COMMISSION'S EXHIBIT NO. 1 966

PRINCIPAL LINES AND PLANTS OF JERSEY CENTRAL POWER & LIGHT CO. AND INTERCONNECTED SYSTEMS



IT-5518

LEGEND

- (A) PHILADELPHIA ELECTRIC CO AND SUBSIDIARIES
- (B) PUBLIC SERVICE ELECTRIC AND GAS CO
- (C) JERSEY CENTRAL POWER & LIGHT CO
- (D) NEW JERSEY POWER & LIGHT CO
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- LOWER VOLTAGE CIRCUITS
- INTERCONNECTION

SCALE
0 5 10 20 30 40 50 60 70 80 MILES

COMMISSION'S EXHIBIT NO. 2

JERSEY CENTRAL POWER AND LIGHT COMPANY

Physical and Operating Characteristics

Items		1934	1935	1936	1937
A. Generating Capacity by Plants					
1. Raritan River (Steam)	Kw.			60,000	60,000
2. South Amboy (Steam)	Kw.			50,000	50,000
3. Whippany (Steam)	Kw.			20,000	20,000
4. Allenhurst (Steam)	Kw.			6,000	6,000
5. Long Branch (Steam)	Kw.			1,300	1,300
6. Morristown (Steam)	Kw.	5,450[1]		—	—
7. Pompton Lakes (Hydro)	Kw.			350	350
Total Generating Capacity	Kw.			137,650	137,650
B. Energy Output by Plants					
1. Raritan River	Kwh.	129,985,900	108,447,800	156,935,500	187,212,200
2. South Amboy	Kwh.	142,416,100	209,196,400	181,059,400	167,441,300
3. Whippany	Kwh.	483,600	350,500	2,714,200	9,864,800
4. Allenhurst	Kwh.	19,730	13,650	33,500	485,600
5. Long Branch	Kwh.	19,840	9,845	27,950	5,950

Commission's Exhibit No. 2

Items		1934	1935	1936	1937
6. Morristown	Kwh.	6,227	—	—	—
7. Pompton Lakes	Kwh.	865,800	903,600	785,600	816,800
Total Energy Output	Kwh.	273,797,197	318,921,795	341,556,150	365,826,650
C. Plant Capability and Demand at Time of System Peak					
Annual demand on system plants	Kw.			66,000	70,200
System capability	Kw.			111,000	121,650
Installed capacity connected to load	Kw.			80,000	105,000
D. System Annual Energy Accounting					
Energy generated	Kwh.	273,797,197	318,921,795	341,556,150	365,826,650
Energy purchased	Kwh.	1,565,920	995,176	1,131,945	1,634,460
Energy sold for resale	Kwh.	56,777,000	77,821,690	70,694,825	61,491,293
Net energy for system	Kwh.	218,586,117	242,095,275	271,993,270	305,969,817
E. Energy Purchased from Others					
1. Received from Public Service Electric and Gas Company at New Lisbon	Kwh.	816,720	969,480	1,237,320	1,315,560
2. Received from Public Service Electric and Gas Company at South Amboy	Kwh.	737,300	296	3,225	315,600

Items		1934	1935	1936	1937
3. Received from New Jersey Power and Light Company at Boonton	Kwh.	11,900	25,400	—108,600[2]	3,300
Total energy purchased	Kwh.	1,565,920	995,176	1,131,945	1,634,460
F. Energy Sold for Resale					
1. Sold to Public Service Electric and Gas Company at South Amboy	Kwh.	56,345,000	77,333,196	70,694,825	55,421,000
2. Sold to New Jersey Power and Light Company at Boonton	Kwh.	432,000	488,500	—	100
3. Sold to Municipal Systems	Kwh.				6,070,193
Total sale for resale	Kwh.	56,777,000	77,821,696	70,694,825	61,491,293

[1] Dismantled November, 1935.

[2] Energy lost in energizing interconnecting line.

Source of Data: All data for 1934, 1935 and 1936 from system report to the Federal Power Commission on Form 11-127. All data for 1937 from reports to the Federal Power Commission on Forms FPC No. 1 and FPC No. 64.

COMMISSION'S EXHIBIT NO. 3

NEW JERSEY POWER AND LIGHT COMPANY
Physical and Operating Characteristics

Items		1934	1935	1936	1937
A. Generating Capacity by Plants					
1. Holland (Steam)	Kw.			55,000	55,000
2. Columbia (Hydro)	Kw.			270	270
Total Generating Capacity	Kw.			55,270	55,270
B. Energy Output by Plants					
1. Holland	Kwh.	312,733,240	303,956,420	357,196,690	323,725,360
2. Columbia	Kwh.	1,072,300	1,104,600	920,000	1,196,700
Total Energy Output	Kwh.	313,805,540	305,061,020	358,116,690	324,922,060
C. Plant Capability and Demand at Time of System Peak					
Annual system demand	Kw.			55,000	49,000
System capability	Kw.			55,000	52,100
Installed capacity connected to load	Kw.			55,000	55,270
D. System Annual Energy Accounting					
Energy generated	Kwh.	313,805,540	305,061,020	358,116,690	324,922,060

Commission's Exhibit No. 3

Items		1934	1935	1936	1937
Energy purchased	Kwh.	91,121,850	95,483,528	67,395,194	84,663,441
Energy sold for resale	Kwh.	259,887,883	244,355,717	238,156,495	207,400,531
Net energy for system	Kwh.	145,039,507	156,188,831	187,355,389	202,184,970
E. Energy Purchased from Others					
1. Firm energy purchased from Metropolitan Edison Co.	Kwh.	646,642	654,077	1,586,794)	
2. Non-firm energy purchased from Metropolitan Edison Co.	Kwh.	51,112,208	61,211,795	35,490,468)	55,359,136
3. Non-firm energy purchased from Central Hudson Gas & Elec. Co.	Kwh.	12,420,000	13,908,656	7,513,732	15,139,205
4. Energy purchased from Jersey Central Power and Light Co. at Boonton	Kwh.	10,634,000	4,887,000	183,200	100
5. Energy purchased from Public Service Elec. & Gas Co. at Roseland	Kwh.	16,027,000	14,606,000	22,405,000	14,030,000
6. Energy purchased from Riegel Paper Corp. at Warren Glen	Kwh.	282,000	216,000	216,000	135,000
Total energy purchased	Kwh.	91,121,850	95,483,528	67,395,194	84,663,441

Items		1934	1935	1936	1937
F. Energy sold for Resale					
1. Firm energy sold to Metropolitan Edison Co.	Kwh.	2,052,876	2,409,761	4,691,951)	
2. Non-firm energy sold to Metropolitan Edison Co.	Kwh.	198,866,534	181,825,122	209,828,994)	174,222,383
3. Energy sold to Central Hudson Gas & Elec. Co.	Kwh.	20,054,573	21,886,934	2,649,950	21,308
4. Energy sold to Jersey Central Power & Light Co. at Boonton	Kwh.	10,213,900	4,423,900	74,600	3,300
5. Energy sold to Public Service Elec. & Gas Co. at Roseland	Kwh.	28,700,000	33,810,000	20,911,000	33,150,000
Total energy sold for resale	Kwh.	259,887,883	244,355,717	238,156,495	207,396,991
Sussex Rural El. Cooperative					3,540
					207,400,531

Source of Data: All data for 1934, 1935 and 1936 from system report to the Federal Power Commission on Form 11-127. All data for 1937 from reports to the Federal Power Commission on Forms FPC No. 1 and FPC No. 64.

COMMISSION'S EXHIBIT NO. 4

PUBLIC SERVICE ELECTRIC AND GAS COMPANY

Physical and Operating Characteristics

Items		1934	1935	1936	1937
A. Generating Capacity by Plants					
1. Kearney (Steam)	Kw.			324,500	324,500
2. Essex (Steam)	Kw.			193,000	193,000
3. Marion (Steam)	Kw.			94,950	94,950
4. Burlington (Steam)	Kw.			51,750	51,750
5. Perth Amboy (Steam)	Kw.			20,250	20,250
Total Capacity	Kw.			684,450	684,450
B. Annual Production by Plants					
1. Kearney	Kwh.	1,225,882,870	1,307,906,210	1,541,724,710	1,410,252,050
2. Essex	Kwh.	354,136,480	343,965,670	403,785,650	427,014,410
3. Marion	Kwh.	145,378,317	84,119,720	80,994,596	54,895,133
4. Burlington	Kwh.	291,249,986	288,532,764	306,994,681	262,272,385
5. Perth Amboy	Kwh.	—	—	—	—
Total Production	Kwh.	2,016,647,653	2,024,524,364	2,333,499,637	2,154,433,978
C. System Capability and Annual Demand at Time of System Peak					
System annual demand	Kw.			504,000	551,900

Commission's Exhibit No. 4

Items		1934	1935	1936	1937
System capability	Kw.			619,000	684,450
Installed capacity connected to load	Kw.			559,000	563,850
Purchased capacity from other utilities	Kw.				80,000
D. System Annual Energy Accounting					
Energy generated	Kwh.	2,016,647,653	2,024,524,364	2,333,499,637	2,154,433,978
Energy purchased	Kwh.	233,692,924	341,699,575	330,435,477	648,258,772
Energy sold for resale	Kwh.	115,963,684	98,526,264	134,256,520	57,921,060
Net energy for system	Kwh.	2,134,376,893	2,267,697,675	2,529,678,594	2,744,771,690
E. Energy Purchased from					
1. Philadelphia Elec. Co. Firm Energy	Kwh.	11,526,345			
2. Philadelphia Elec. Co. Non-firm Energy	Kwh.	79,990,411	156,330,676	169,649,000	465,392,000
3. Pennsylvania Power and Light Co.	Kwh.	26,477,604	49,499,908	41,986,000	59,201,000
4. Staten Island Edison Corp.	Kwh.	3,033,800	3,147,300	3,111,400	3,119,200
5. Rockland Elec. Co.	Kwh.	1,376,064	2,455,391	6,046,477	4,622,752
6. Jersey Central Pwr. & Lt. Co.	Kwh.	56,345,000	77,788,800	70,855,000	55,421,000

Items		1934	1935	1936	1937
7. New Jersey Pwr. & Lt. Co.	Kwh.	28,700,000	33,810,000	20,911,000	33,150,000
8. Passaic Valley Water Com.	Kwh.	5,947,200	4,401,600	4,723,200	7,688,120
9. Society for Establishing Useful Manufactures.	Kwh.	20,296,500	14,267,900	13,153,400	19,664,700
Total energy purchased	Kwh.	233,692,924	341,699,575	330,435,477	648,258,772
F. Energy Sold for Resale to					
1. Philadelphia Elec. Co. Non-firm energy	Kwh.	60,808,104	45,469,604	54,357,000	5,488,000
2. Pennsylvania Power and Light Co.	Kwh.	18,301,360	7,635,380	10,611,000	1,244,000
3. Staten Island Edison Corp.	Kwh.	3,828,100	3,453,500	3,286,600	3,093,400
4. Jersey Central Pwr. & Lt. Co.	Kwh.	1,554,020	1,425,380	1,409,720	1,631,160
5. New Jersey Pwr. & Lt. Co.	Kwh.	16,027,000	14,606,000	22,405,000	14,030,000
6. Rockland Elec. Co.	Kwh.	14,652,500	25,179,000	41,117,000	30,694,500
7. Pennsylvania R. R. Co.	Kwh.	49,000	—	—	—
8. Borough of Milton, New Jersey	Kwh.	743,600	757,400	761,400	1,036,200
9. Society for Establishing Useful Manufactures	Kwh.	—	—	317,800	703,800
Total energy sold for resale	Kwh.	115,963,684	98,526,264	134,256,520	57,921,060

Source of Data: All data for 1934, 1935 and 1936 from system report to the Federal Power Commission on Form 11-127. All data for 1937 from reports to the Federal Power Commission on Forms FPC No. 1 and FPC No. 64.

COMMISSION'S EXHIBIT NO. 5

STATEN ISLAND EDISON CORPORATION
Physical and Operating Characteristics

Items		1934	1935	1936	1937
A. Generating Capacity by Plants					
Livingston	Kw.			47,500	47,500
B. Annual Output by Plant					
Livingston	Kwh.	110,081,700	112,189,400	119,435,360	127,054,880
C. System Capability and Annual Demand at Time of Peak					
System annual demand	Kw.			30,600	31,700
System capability	Kw.			47,500	46,500
Installed capacity connected to load	Kw.			30,000	30,000
D. System Annual Energy Accounting					
Energy generated	Kwh.	110,081,700	112,189,400	119,435,360	127,054,880
Energy purchased	Kwh.	3,828,100	3,453,500	3,286,600	3,093,400

Items		1934	1935	1936	1937
Energy sold for resale	Kwh.	3,033,800	3,147,300	3,111,400	3,119,200
Net energy for system	Kwh.	110,876,000	112,495,600	119,610,560	127,029,080
E. Energy Purchased from Others					
Energy purchased from Public Service Elec. & Gas Co.	Kwh.	3,828,100	3,453,500	3,286,600	3,093,400
F. Energy Sold to Others for Resale					
Energy sold to Public Service Elec. & Gas Co.	Kwh.	3,033,800	3,147,300	3,111,400	3,119,200

Source of Data: All data for 1934, 1935 and 1936 from system report to the Federal Power Commission on Form 11-127. All data for 1937 from reports to the Federal Power Commission on Forms FPC No. 1 and FPC No. 64.

Commission's Exhibit No. 5

COMMISSION'S EXHIBIT NO. 6

ANNUAL ENERGY PRODUCTION, INTERCHANGE AND NET AVAILABLE FOR THE PRINCIPAL UTILITY SYSTEMS AFFECTED BY THE OPERATIONS

		TRANSACTIONS WITH OTHER SYSTEMS						
		Jersey Central Power & Light Co.		*Public Service Electric & Gas Co.*		*New Jersey Power & Light Co.*		
	Production Kwh	*Purchased from Kwh*	*Sold to Kwh*	*Purchased from Kwh*	*Sold to Kwh*	*Purchased from Kwh*	*Sold to Kwh*	*Pu*
Jersey Central Power & Light Co.								
1934	273,797,197	.....	.....	1,554,020	56,345,000	11,900	432,000	
1935	318,921,795	.....	.....	969,776	77,333,196	25,400	488,500	
1936	341,556,150	.....	.....	1,240,545	70,694,825	108,600	.....	
1937	365,826,650	.....	.....	1,631,160	55,421,000	3,300	100	
Public Service Electric & Gas Co.								
1934	2,016,647,653	56,345,000	1,554,020	.....	.....	28,700,000	16,027,000	
1935	2,024,524,364	77,333,196	969,776	.....	.....	33,810,000	14,806,000	
1936	2,333,499,637	70,694,825	1,240,545	.....	.....	20,911,000	22,405,000	
1937	2,154,433,978	55,421,000	1,631,160	.....	.....	33,160,000	14,030,000	
New Jersey Power & Light Co.								
1934	313,805,540	432,000	11,900	16,027,000	28,700,000	.....	.....	
1935	305,061,020	488,500	25,400	14,606,000	33,810,000	.....	.....	
1936	358,116,690	.....	108,600	22,405,000	20,911,000	.....	.....	
1937	324,922,060	100	3,300	14,030,000	33,150,000	.....	.....	
Staten Island Edison Corporation								
1934	110,081,700	.....	.....	3,826,100	3,033,800	.....	.....	
1935	112,189,400	.....	.....	3,453,500	3,147,300	.....	.....	
1936	119,435,360	.....	.....	3,266,600	3,111,400	.....	.....	
1937	127,055,000	.....	.....	3,093,400	3,119,200	.....	.....	

Data from System Report to the Federal Power Commission

COMMISSION'S EXHIBIT NO. 6

VAILABLE FOR THE PRINCIPAL UTILITY SYSTEMS AFFECTED BY THE OPERATIONS OF JERSEY CENTRAL POWER AND LIGHT COMPANY

al Power Co.	TRANSACTIONS WITH OTHER SYSTEMS								
	Public Service Electric & Gas Co.		New Jersey Power & Light Co.		Staten Island Edison Corporation		Other Systems		Net Available for System
Sold to Kwh	Purchased from Kwh	Sold to Kwh	Purchased from Kwh	Sold to Kwh	Purchased from Kwh	Sold to Kwh	Purchased from Kwh	Sold to Kwh	Kwh
.....	1,554,020	56,345,000	11,900	432,000	.....	.....	.....	.....	218,586,117
.....	969,776	77,333,196	25,400	488,500	.....	.....	.....	.....	242,095,275
.....	1,240,545	70,694,825	108,600	.....	.....	.....	.....	.....	271,993,270
.....	1,631,160	55,421,000	3,300	100	.....	.....	.....	6,020,193	305,969,817
1,554,020	.....	.....	28,700,000	16,027,000	3,033,800	3,828,100	145,614,124	94,554,564	2,134,376,893
969,776	.....	.....	33,810,000	14,806,000	3,147,300	3,453,500	226,953,475	79,041,384	2,267,697,675
1,240,545	.....	.....	20,911,000	22,405,000	3,111,400	3,286,600	235,558,077	107,164,200	2,529,678,594
1,631,160	.....	.....	33,160,000	14,030,000	3,119,200	3,093,400	556,568,572	39,166,500	2,744,771,690
11,900	16,027,000	28,700,000	.....	.....	.....	.....	64,460,850	220,973,983	145,039,507
25,400	14,606,000	33,810,000	.....	.....	.....	.....	75,990,528	206,121,817	156,188,831
108,600	22,405,000	20,911,000	.....	.....	.....	.....	44,806,994	217,170,895	187,355,389
3,300	14,030,000	33,150,000	.....	.....	.....	.....	70,633,341	174,247,231	202,184,970
.....	3,826,100	3,033,800	.....	.....	.....	.....	.....	.....	110,876,000
.....	3,453,500	3,147,300	.....	.....	.....	.....	.....	.....	112,495,600
.....	3,266,600	3,111,400	.....	.....	.....	.....	.....	.....	119,610,560
.....	3,093,400	3,119,200	.....	.....	.....	.....	.....	.....	127,029,200

Data from System Report to the Federal Power Commission

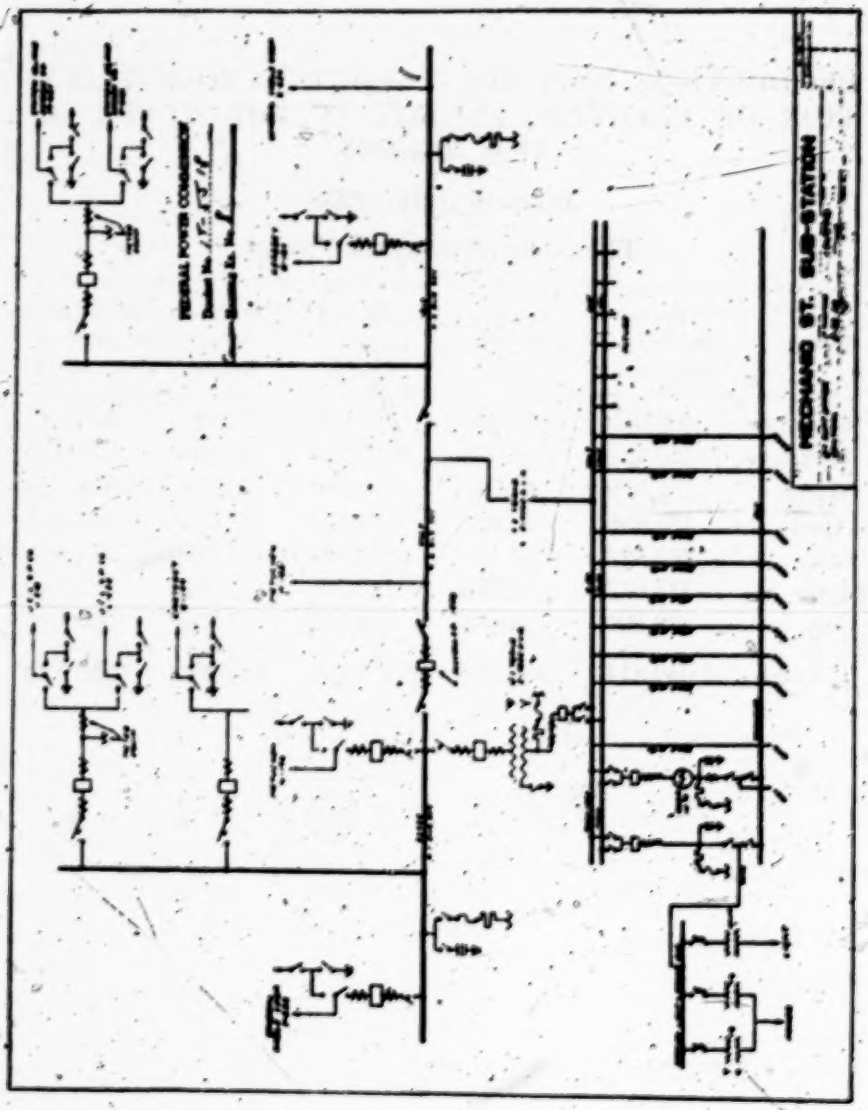
COMMISSION'S EXHIBIT NO. 7

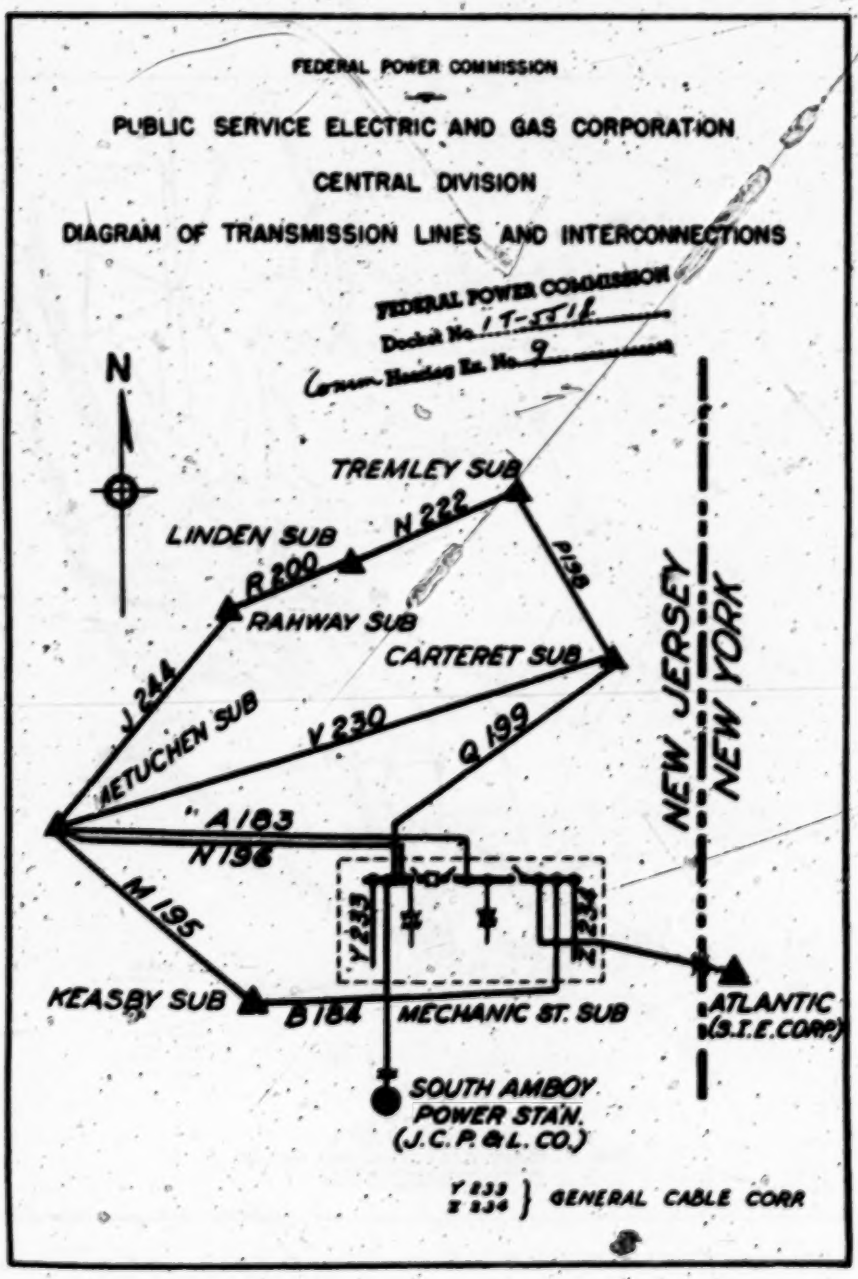
PRODUCTION, EXPORTS, IMPORTS AND UTILIZATION OF ELECTRIC ENERGY IN THE STATE OF NEW JERSEY

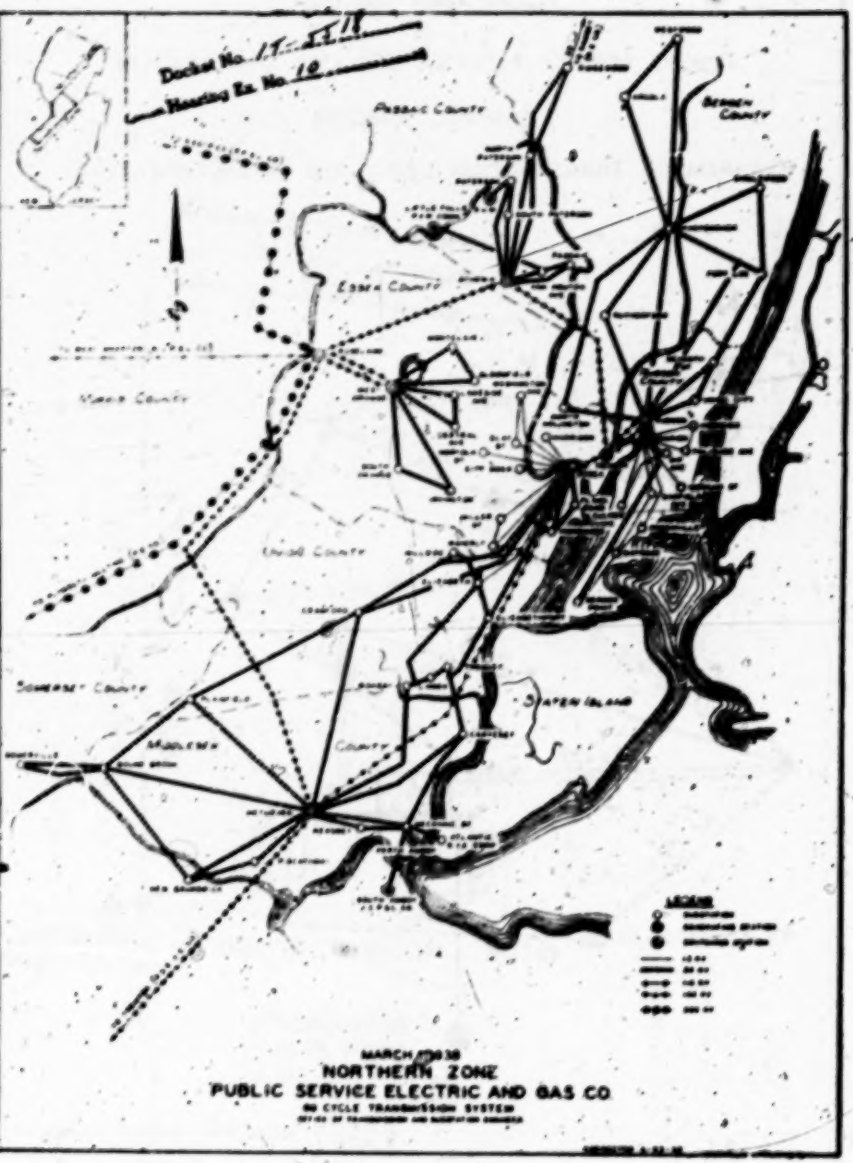
January-July, 1938

Thousand Kilowatts Hours

Month	*Production in the State of New Jersey*	*Imports from other States*	*Production and Imports*	*Exports to other States*	*Utilization in the State of New Jersey*
January	300,076	57,056	357,132	52,281	304,851
February	250,460	67,926	318,386	46,944	271,442
March	277,679	67,005	344,684	46,498	298,186
April	275,436	52,897	328,333	56,716	271,617
May	282,582	52,176	334,758	61,903	272,855
June	315,072	34,219	349,291	72,508	276,783
July	338,509	24,688	363,197	77,146	286,051
Total	2,039,814	355,967	2,395,761	413,996	1,981,785


FEDERAL POWER COMMISSION
RICHLAND ST. SUB-STATION


FEDERAL POWER COMMISSION
PUBLIC SERVICE ELECTRIC AND GAS CORPORATION
CENTRAL DIVISION
DIAGRAM OF TRANSMISSION LINES AND INTERCONNECTIONS
FEDERAL POWER COMMISSION
Docket No. IT-5316
Comm. Hearing Ex. No. 9
N
TREMLEY SUB
LINDEN SUB
N 222
R 200
P 198
RAHWAY SUB
CARTERET SUB
J 244
METUCHEN SUB
V 230
Q 199
A 183
N 196
M 195
Y 233
Z 234
KEASBY SUB
B 184
MECHANIC ST. SUB
NEW JERSEY
NEW YORK
ATLANTIC
(S.I.E. CORP.)
SOUTH AMBOY
POWER STAN.
(J.C.P.&L. CO.)
Y 833
Z 834
GENERAL CABLE CORP.


Docket No. 11-11-11
Hearing Ex. No. 10
Passaic County
Bergen County
Essex County
Union County
Somerset County
Middlesex County
Staten Island
NORTHERN ZONE
PUBLIC SERVICE ELECTRIC AND GAS CO

COMMISSION'S EXHIBIT NO. 11

PUBLIC SERVICE ELECTRIC AND GAS COMPANY
MECHANICS ST. SUBSTATION
INSTRUMENT READINGS RECORDED ON
SUBSTATION LOG SHEETS

Year Month Day	Hour	J.C.P.& L.Co. IN	S.I.Ed. Corp. OUT	Mechanic St. Sub. Local Load	Mechanic St. Sub. General Cable Load	Carteret Substation Line Q 199	Keasbey Substation Line B 184	Metuchen Sub. Line A 183	Metuchen Sub. Line N 196
		Kws.	Kws.	Kva.	Amps. (1)	Amps. (2)	Amps. (2)	Amps. (2)	Amps. (2)
1937									
1-26	8:30 P. M.	19,000	1,000	3,973	135	180	210	150	150
1-26	9:00 P. M.	19,000	1,500	3,635	120	225	225	180	165
1-26	9:30 P. M.	21,000	1,000	3,457	135	240	240	270	225
1-26	10:00 P. M.	20,000	2,500	3,277	120	225	255	270	225
1-27	10:30 P. M.	18,000	1,500	2,993	150	225	240	270	225
1-27	11:00 P. M.	16,000	1,000	2,515	165	180	150	165	150
1-28	6:30 P. M.	21,000	2,000	4,557	75	270	300	330	270
1-28	7:30 A. M.	21,000	500	3,022	150	270	300	300	300
2-25	5:30 P. M.	20,000	500	4,216	210	270	225	240	225
7-7	6:30 P. M.	12,000	2,000	3,759	90	240	150	150	120
7-7	7:30 P. M.	11,000	500	3,556	75	240	150	180	150
7-9	3:00 A. M.	12,000	500	3,125	75	210	210	225	180
7-9	4:00 A. M.	10,000	500	3,125	75	210	150	195	150
7-11	7:30 P. M.	11,000	1,000	3,125	60	180	210	270	210

Commission's Exhibit No. 11

Year Month Day	Hour	J.C.P. & L. Co/ IN	S.I.Ed. Corp. OUT	Mechanic St. Sub. Local Load	Mechanic St. Sub. General Cable Load	Carteret Substation Line Q 199	Keasbey Substation Line B 184	Metuchen Sub. Line A 183	Metuchen Sub. Line N 196
		Kws.	Kws.	Kva.	Amps. (1)	Amps. (2)	Amps. (2)	Amps. (2)	Amps. (2)
7-11	8:00 P. M.	10,000	500	3,379	60	150	210	210	180
7-19	7:00 A. M.	10,000	2,000	2,717	60	150	150	180	150
7-20	6:30 A. M.	11,000	500	2,667	60	150	150	180	150
7-21	4:00 P. M.	12,000	1,000	4,850	165	240	210	270	
7-26	11:00 P. M.	11,000	2,000	3,708	75	210	150	180	150
7-28	5:00 P. M.	11,000	1,000	3,708	75	165	150	165	150
7-29	5:00 A. M.	10,000	500	2,743	60	180	135	150	150
7-30	5:00 P. M.	13,000	1,000	3,759	60	240	150	165	150
8-2	10:30 P. M.	12,000	500	3,982	105	240	150	180	150
8-4	6:00 P. M.	10,000	4,000	3,750	105	270	280	210	150
8-5	7:00 A. M.	14,000	1,000	2,819	60	180	150	180	150
8-5	7:30 A. M.	11,000	1,000	3,450	60	210	120	180	150
8-5	8:00 A. M.	10,000	1,000	4,334	60	150	120	150	150
8-7	4:00 A. M.	12,000	500	2,845	60	180	180	180	150
8-10	6:00 A. M.	12,000	1,000	2,743	60	210	210	270	210
8-11	4:00 A. M.	14,000	500	2,845	60	210	210	180	150
8-17	7:00 A. M.	14,000	1,000	2,946	75	150	150	150	150
8-22	12:00 N	13,000	500	3,528	60	210	210	210	180
8-24	10:00 P. M.	12,000	500	3,982	60	240	150	150	150
9-4	10:00 P. M.	10,000	500	4,608	60	210	90	150	150
9-10	11:30 A. M.	10,000	1,000	5,093	120	270	75	180	150
9-16	12:00 M	14,000	500	3,962	135	240	150	180	150
9-17	4:00 A. M.	12,000	500	2,489	60	150	120	150	150

Year Month Day	Hour	J.C.P. & L. Co. IN	S.I.Ed. Corp. OUT	Mechanic St. Sub. Local Load	Mechanic St. Sub. General Cable Load	Carteret Substation Line Q 199	Keasbey Substation Line B 184	Metuchen Sub. Line A 183	Metuchen Sub. Line N 196
		Kws.	Kws.	Kva.	Amps. (1)	Amps. (2)	Amps. (2)	Amps. (2)	Amps. (2)
9-18	2:30 P. M.	14,000	1,000	3,302	60	180	180	180	150
9-20	10:00 P. M.	11,000	1,000	3,730	60	270	90	150	120
9-20	10:30 P. M.	10,000	500	3,500	60	300	90	150	120
9-20	11:00 P. M.	12,000	1,000	3,328	60	270	90	150	120
9-26	10:00 P. M.	10,000	2,000	3,406	60	150	90	150	120
9-26	10:30 P. M.	10,000	500	3,096	60	180	150	180	150
9-26	11:00 P. M.	12,000	500	2,946	60	180	180	180	150
9-27	2:30 P. M.	12,000	500	5,200	90	330	0	210	165
9-28	8:30 P. M.	15,000	500	4,788	75	330	150	165	150
9-30	1:00 P. M.	14,000	500	4,687	135	0	180	210	180
10-2	12:00 M	13,000	1,000	3,277	60	270	180	180	150
10-4	5:00 P. M.	12,000	1,000	3,906	90	300	150	180	150
10-7	9:00 A. M.	12,000	1,500	4,886	135	330	120	0	150
10-8	11:30 A. M.	14,000	500	5,000	75	360	150	210	180
10-9	10:00 P. M.	12,000	500	4,198	60	240	150	150	150
10-11	12:30 P. M.	12,000	500	3,500	105	360	0	210	150
10-16	7:00 P. M.	12,000	500	5,080	60	300	150	180	150
10-17	9:00 P. M.	12,000	500	3,404	60	240	120	150	90
10-19	1:00 A. M.	11,000	1,000	2,642	60	300	150	180	150
10-25	8:00 P. M.	12,000	500	4,939	60	330	150	180	150
10-26	11:00 P. M.	11,000	2,000	3,200	60	270	120	150	120
10-27	8:00 P. M.	12,000	1,000	4,838	60	330	120	150	150
10-31	5:30 P. M.	10,000	1,500	3,174	60	180	150	150	120

Year Month Day	Hour	J.C.P.& L.Cp. IN	S.I.Ed. Corp. OUT	Mechanic St. Sub. Local Load	Mechanic St. Sub. General Cable Load	Carteret Substation Line Q 199	Keasbey Substation Line B 184	Metuchen Sub. Line A 183	Metuchen Sub. Line N 196
		Kws.	Kws.	Kva.	Amps. (1)	Amps. (2)	Amps. (2)	Amps. (2)	Amps. (2)
11-1	7:00 P. M.	13,000	500	4,965	60	330	120	150	150
11-4	8:30 P. M.	12,000	500	4,648	60	330	120	150	120
11-5	5:30 P. M.	13,000	1,500	5,600	60	360	150	180	150
11-12	8:00 P. M.	12,000	500	5,156	60	300	120	150	120
11-16	7:00 P. M.	16,000	1,000	5,100	60	390	150	180	165
11-24	8:00 A. M.	10,000	2,000	3,730	60	270	150	210	180
11-27	11:00 P. M.	10,000	500	3,021	60	210	150	150	150
12-1	6:30 P. M.	13,000	500	5,257	60	270	150	210	180
12-9	10:30 P. M.	11,000	500	3,383	75	270	180	195	165
12-10	9:30 P. M.	12,000	500	4,216	75	285	120	150	120
12-15	8:30 P. M.	10,000	500	5,217	75	300	120	150	120
12-15	9:00 P. M.	10,000	1,000	4,838	75	270	90	150	90
12-15	9:30 P. M.	10,000	500	4,160	60	270	90	150	120
12-15	10:00 P. M.	11,000	500	3,805	75	300	90	150	120
12-16	12:00 M	11,000	500	3,988	150	300	150	150	150
12-16	12:30 P. M.	14,000	500	3,404	135	300	150	180	150
12-16	1:00 P. M.	11,000	500	4,225	90	330	90	150	120
12-17	7:30 A. M.	13,000	1,000	2,867	60	225	210	210	180
12-20	9:30 P. M.	13,000	500	4,696	75	330	180	180	150
12-22	10:00 P. M.	13,000	1,000	4,334	75	330	120	150	90
12-23	8:00 P. M.	14,000	1,500	5,594	75	300	120	120	90

Year Month Day	Hour	J. C. P. & L. Co. IN	S. I. Ed. Corp. OUT	Mechanic St. Sub. Local Load	Mechanic St. Sub. General Cable Load	Carteret Substation Line Q 199	Keasbey Substation Line B 184	Metuchen Sub. Line A 183	Metuchen Sub. Line N 196
		Kws.	Kws.	Kva.	Amps. (1)	Amps. (2)	Amps. (2)	Amps. (2)	Amps. (2)
1938									
1-6	7:00 P. M.	9,000	500	4,687	60	270	90	150	150
1-6	7:30 P. M.	10,000	500	4,572	75	270	90	150	120
1-10	5:00 P. M.	14,000	2,000	5,080	75	270	150	150	150
1-12	9:00 A. M.	13,000	500	4,425	105	360	150	210	150
1-12	9:30 A. M.	12,000	500	4,900	105	330	120	180	150
1-18	8:30 P. M.	12,000	1,000	4,216	105	330	165	180	150
1-19	3:30 P. M.	11,000	2,000	4,572	75	315	165	225	180
1-19	4:00 P. M.	13,000	500	4,352	90	300	180	240	210
1-19	4:30 P. M.	9,000	500	4,954	90	240	180	210	180
1-19	5:00 P. M.	9,000	500	5,108	90	270	180	180	150
1-24	11:00 P. M.	10,000	1,000	2,687	60	270	180	210	180
2-3	3:00 P. M.	13,000	1,000	4,710	75	300	210	240	210
2-3	3:30 P. M.	11,000	1,000	4,454	75	270	210	270	210
2-4	10:30 P. M.	10,000	1,000	3,174	60	225	150	210	150
2-4	11:00 P. M.	11,000	1,000	2,740	60	225	150	210	150
2-13	8:30 P. M.	11,000	1,500	3,251	60	210	150	180	150
2-17	8:30 P. M.	12,000	500	4,191	165	270	180	270	240
2-18	7:30 P. M.	12,000	1,000	4,826	75	300	150	180	150
2-18	8:00 P. M.	11,000	1,000	4,684	105	270	180	210	180
2-18	8:30 P. M.	10,000	1,500	4,403	75	270	150	180	150
2-18	9:00 P. M.	10,000	500	4,096	75	240	150	180	150

Year Month Day	Hour	J.C.P. & L.Co. IN	S.I.Ed. Corp. OUT	Mechanic St. Sub. Local Load	Mechanic St. Sub. General Cable Load	Carteret Substation Line Q 199	Keasbey Substation Line B 184	Metuchen Sub. Line A 183	Metuchen Sub. Line N 196
		Kws.	Kws.	Kva.	Amps. (1)	Amps. (2)	Amps. (2)	Amps. (2)	Amps. (2)
2-23	9:00 A. M.	12,000	1,000	4,572	60	330	180	270	225
2-24	9:30 A. M.	12,000	500	4,486	105	330	180	240	210
2-28	7:30 P. M.	10,000	500	4,547	60	270	90	150	120
3-9	9:30 P. M.	10,000	500	3,810	105	300	150	180	150
3-11	9:00 P. M.	11,000	1,000	4,216	105	300	120	150	120
3-15	9:00 P. M.	12,000	1,000	4,013	90	300	150	180	150
3-16	1:00 P. M.	12,000	500	4,400	135	300	90	150	120
3-22	9:00 A. M.	10,000	500	4,231	90	300	180	210	0
3-22	9:30 A. M.	11,000	500	4,464	105	300	150	210	0
3-22	10:00 A. M.	13,000	500	4,600	105	300	150	210	0
3-31	3:00 P. M.	11,000	1,500	4,788	105	240	150	150	120
3-31	3:30 P. M.	9,000	1,500	4,838	105	210	150	180	150
3-31	4:00 P. M.	7,000	1,000	4,990	75	210	150	150	120
3-31	4:30 P. M.	9,000	1,000	4,420	75	240	150	180	150
3-31	5:00 P. M.	10,000	500	4,166	75	240	150	180	150
4-6	3:00 P. M.	11,000	1,000	5,100	90	330	150	0	150
4-6	3:30 P. M.	11,000	500	4,950	90	330	150	0	165
4-7	8:30 A. M.	11,000	500	3,850	75	300	150	150	150
4-11	6:00 P. M.	9,000	2,500	3,251	90	180	90	150	120
4-18	6:30 P. M.	10,000	500	3,683	60	225	150	165	150
4-26	11:30 A. M.	11,000	500	4,725	135	300	90	180	150
4-27	10:30 A. M.	12,000	500	4,500	135	330	210	0	270
4-27	11:00 A. M.	9,000	1,500	4,500	135	300	180	0	240

Year Month Day	Hour	J.C.P. & L.Co. IN	S.I.Ed. Corp. OUT	Mechanic St. Sub. Local Load	Mechanic St. Sub. General Cable Load	Carteret Substation Line Q 199	Keasbey Substation Line B 184	Metuchen Sub. Line A 183	Metuchen Sub. Line N 196
		Kws.	Kws.	Kva.	Amps. (1)	Amps. (2)	Amps. (2)	Amps. (2)	Amps. (2)
4-27	11:30 A. M.	11,000	500	4,450	135	330	180	0	240
5-3	3:00 P. M.	10,000	1,000	4,920	240	240	180	0	240
5-3	3:30 P. M.	10,000	1,000	4,811	225	270	210	0	225
5-4	2:00 P. M.	10,000	500	4,738	105	210	90	90	90
5-4	2:30 P. M.	12,000	500	4,489	105	210	90	120	90
5-4	3:00 P. M.	12,000	1,000	4,638	105	240	120	120	90
5-10	3:00 P. M.	11,000	500	4,650	135	300	150	150	120
5-10	3:30 P. M.	10,000	1,000	4,698	120	300	120	150	150
5-10	4:00 P. M.	10,000	500	4,445	105	270	120	150	150
5-10	4:30 P. M.	11,000	2,500	4,147	75	270	150	150	150
5-10	5:00 P. M.	9,000	500	3,916	75	210	120	150	120
5-11	2:00 P. M.	11,000	1,000	4,475	150	270	60	120	120
5-11	2:30 P. M.	11,000	1,000	4,500	105	300	90	150	120
5-11	3:00 P. M.	11,000	1,000	4,561	150	270	90	150	120
5-11	3:30 P. M.	14,000	1,000	4,284	105	300	120	180	150
5-12	10:00 A. M.	12,000	1,500	4,650	105	300	120	150	150
5-18	11:30 A. M.	13,000	1,500	4,650	90	360	150	210	180
5-19	4:30 P. M.	13,000	1,000	4,064	60	240	150	210	210
5-20	10:30 A. M.	16,000	1,000	4,325	120	330	180	240	180
5-20	11:00 A. M.	14,000	500	4,425	135	330	150	210	180
5-20	11:30 A. M.	13,000	1,500	4,575	105	300	150	180	150
5-23	10:30 A. M.	16,000	500	4,700	60	330	195	210	180
5-23	11:00 A. M.	12,000	1,000	4,700	60	315	120	165	150

Year Month Day	Hour	J.C.P. & L. Co. IN	S.I.Ed. Corp. OUT	Mechanic St. Sub. Local Load	Mechanic St. Sub. General Cable Load	Carteret Substation Line Q 199	Keasbey Substation Line B 184	Metuchen Sub. Line A 183	Metuchen Sub. Line N 196
		Kws.	Kws.	Kva.	Amps. (1)	Amps. (2)	Amps. (2)	Amps. (2)	Amps. (2)
5-23	11:30 A. M.	15,000	1,500	4,800	60	315	150	180	165
5-31	9:30 A. M.	12,000	1,000	4,950	105	180	120	165	150
6-1	9:30 A. M.	14,000	2,000	4,050	120	300	120	150	150
6-2	8:30 A. M.	11,000	1,000	3,650	120	270	120	150	120
6-7	4:30 P. M.	14,000	500	4,284	105	225	180	225	210
6-8	11:00 A. M.	12,000	500	4,850	150	300	90	150	120
6-10	8:00 A. M.	12,000	500	3,302	75	180	150	180	150
6-12	11:00 P. M.	13,000	500	2,943	60	210	180	180	180
6-13	12:00 M.	12,000	1,500	3,760	75	270	150	210	150
6-14	9:00 A. M.	12,000	500	4,700	90	270	90	150	150
6-15	8:30 A. M.	14,000	500	4,300	150	300	150	165	150
6-16	2:30 P. M.	13,000	2,000	4,875	120	240	90	330	0
6-20	9:30 A. M.	12,000	1,500	5,166	75	330	120	150	120
6-22	4:00 P. M.	13,000	1,500	4,600	90	270	60	150	120
6-23	9:00 A. M.	14,000	1,500	4,525	75	300	0	225	180
6-24	9:00 A. M.	12,000	2,000	4,500	105	225	150	165	150
6-25	4:00 P. M.	13,000	500	3,377	60	195	150	165	150
6-26	10:30 A. M.	14,000	1,000	2,278	60	150	180	225	180
7-11	10:30 P. M.	10,000	500	3,700	60	240	50	120	60
7-12	5:00 P. M.	12,000	1,000	3,800	60	240	150	180	150
7-14	2:30 P. M.	11,000	500	5,412	135	300	60	150	90
7-18	5:00 P. M.	11,000	500	4,082	60	210	150	180	150
7-19	12:30 P. M.	14,000	500	3,700	90	240	150	180	150

Year Month Day	Hour	I.C.P. & L. Co. IN	S.I. Ed. Corp. OUT	Mechanic St. Sub. Local Load	General Cable Load	Carteret Substation Line Q 199	Keasbey Substation Line B 184	Metuchen Sub. Line A 183	Metuchen Sub. Line N 196
		Kws.	Kws.	Kva.	Amps. (1)	Amps. (2)	Amps. (2)	Amps. (2)	Amps. (2)
7-25	3:00 P. M.	14,000	500	5,275	120	300	150	180	150
7-25	3:30 P. M.	12,000	500	5,000	105	270	150	180	150
7-25	4:00 P. M.	11,000	1,000	5,115	75	270	150	180	150
8-1	7:00 A. M.	10,000	2,000	2,475	60	150	120	150	120
8-5	2:00 P. M.	12,000	1,500	5,264	60	270	150	195	165
8-17	8:00 A. M.	12,000	3,000	4,150	105	210	180	240	210
8-26	4:30 P. M.	12,000	2,000	4,330	60	420	120	150	150
8-26	5:00 P. M.	11,000	2,000	3,739	60	330	90	120	90
8-28	10:30 P. M.	11,000	1,500	3,150	60	210	120	180	150
8-29	1:30 P. M.	12,000	3,000	4,969	120	285	75	150	150
9-2	9:00 A. M.	10,000	500	4,034	60	300	150	180	150
9-5	11:00 P. M.	11,000	500	2,850	60	210	180	225	195
9-6	2:00 P. M.	11,000	2,000	5,018	90	300	120	180	150

(1) Sum of 6 ammeter readings: Three phases and two circuits.
(2) Sum of 3 ammeter readings.

Commission's Exhibit No. 11

COMMISSION'S EXHIBIT NO. 12

PUBLIC SERVICE ELECTRIC AND GAS COMPANY
MECHANICS ST. SUBSTATION
SUBSTATION LOAD AND SUPPLY

Year Month Day	Hour	Received from J. C. P. & L. Co. Kws.	Mechanics St. Substation Load: Local Load Kws.	General Cable Load Kws.	Staten Island Edison Corp. Kws.	Total Load at Mechanics Kws.	Surplus Power at Mechanics Kws.
1937							
1-26	8:30 P. M.	10,000	2,820	1,650	1,000	5,470	13,530
1-26	9:00 P. M.	19,000	2,580	1,470	1,500	5,550	13,450
1-26	9:30 P. M.	21,000	2,450	1,650	1,000	5,100	15,900
1-26	10:00 P. M.	20,000	2,330	1,470	2,500	6,300	13,700
1-27	10:30 P. M.	18,000	2,130	1,830	1,500	5,460	12,540
1-27	11:00 P. M.	16,000	1,790	2,020	1,000	4,810	11,190
1-28	6:30 P. M.	21,000	3,240	920	2,000	6,160	14,840
1-28	7:30 A. M.	21,000	2,150	1,830	500	4,480	16,520
2-25	5:30 P. M.	20,000	2,990	2,570	500	6,060	13,940
7-7	6:30 P. M.	12,000	2,670	1,100	2,000	5,770	6,230
7-7	7:30 P. M.	11,000	2,520	920	500	3,940	7,060
7-9	3:00 A. M.	12,000	2,220	920	500	3,640	8,360

Commission's Exhibit No. 12

Year Month Day	Hour	Received from J. C. P. & L. Co. Kws.	Local Load Kws.	Mechanics St. Substation Load General Cable Load Kws.	Staten Island Edison Corp. Kws.	Total Load at Mechanics Kws.	Surplus Power at Mechanics Kws.
7-9	4:00 A. M.	10,000	2,220	920	500	3,640	6,360
7-11	7:30 P. M.	11,000	2,220	730	1,000	3,950	7,050
7-11	8:00 P. M.	10,000	2,400	730	500	3,630	6,370
7-19	7:00 A. M.	10,000	1,930	730	2,000	4,660	6,340
7-20	6:30 A. M.	11,000	1,890	730	500	3,120	7,660
7-21	4:00 P. M.	12,000	3,440	2,020	1,000	6,460	5,540
7-26	11:00 P. M.	11,000	2,630	920	2,000	5,550	5,450
7-28	5:00 P. M.	11,000	2,630	920	1,000	4,550	6,450
7-29	5:00 A. M.	10,000	1,950	730	500	3,180	6,620
7-30	5:30 P. M.	13,000	2,670	730	1,000	4,400	8,600
8-2	10:30 P. M.	12,000	2,830	1,280	500	4,610	7,390
8-4	6:00 P. M.	10,000	2,660	1,280	4,000	7,940	2,060
8-5	7:00 A. M.	14,000	2,000	730	1,000	3,730	10,270
8-5	7:30 A. M.	11,000	2,450	730	1,000	4,180	6,820
8-5	8:00 A. M.	10,000	3,080	730	1,000	4,810	5,190
8-7	4:00 A. M.	12,000	2,020	730	500	3,250	8,750
8-10	6:00 A. M.	12,000	1,950	730	1,000	3,680	8,320
8-11	4:00 A. M.	14,000	2,020	730	500	3,250	10,750
8-17	7:00 A. M.	14,000	2,090	920	1,000	4,010	9,990
8-22	12:00 N.	13,000	2,500	730	500	3,730	9,270

Year Month Day	Hour	Received from J. C. P. & L. Co. Kws.	Mechanics St. Substation Load — Local Load Kws.	General Cable Load Kws.	Staten Island Edison Corp. Kws.	Total Load at Mechanics Kws.	Surplus Power at Mechanics Kws.
8-24	10:00 P. M.	12,000	2,830	730	500	4,060	7,940
9-4	10:00 P. M.	10,000	3,270	730	500	4,500	5,500
9-10	11:30 A. M.	10,000	3,620	1,470	1,000	6,090	3,910
9-16	12:00 M.	14,000	2,810	1,650	500	4,960	9,040
9-17	4:00 A. M.	12,000	1,770	730	500	3,000	9,000
9-18	2:30 P. M.	14,000	2,340	730	1,000	4,070	9,930
9-20	10:00 P. M.	11,000	2,650	730	1,000	4,380	6,620
9-20	10:30 P. M.	10,000	2,490	730	500	3,720	6,280
9-20	11:00 P. M.	12,000	2,360	730	1,000	4,090	7,910
9-26	10:00 P. M.	10,000	2,420	730	2,000	5,150	4,850
9-26	10:30 P. M.	10,000	2,200	730	500	3,430	6,570
9-26	11:00 P. M.	12,000	2,090	730	500	3,320	8,680
9-27	2:30 P. M.	12,000	3,690	1,100	500	5,290	6,710
9-28	8:30 P. M.	15,000	3,400	920	500	4,820	10,180
9-30	1:00 P. M.	14,000	3,330	1,650	500	5,480	8,520
10-2	12:00 M.	13,000	2,330	730	1,000	4,060	8,940
10-4	5:00 P. M.	12,000	2,770	1,100	1,000	4,870	7,130
10-7	9:00 A. M.	12,000	3,470	1,650	1,500	6,620	5,380
10-8	11:30 A. M.	14,000	3,550	920	500	4,970	9,030
10-9	10:00 P. M.	12,000	2,980	730	500	4,210	7,790

Year Month Day	Hour	Received from J. C. P. & L. Co. Kws.	Local Load Kws.	Mechanics St. Substation Load — General Cable Load Kws.	Staten Island Edison Corp. Kws.	Total Load at Mechanics Kws.	Surplus Power at Mechanics Kws.
10-11	12:30 P. M.	12,000	2,480	1,280	500	4,260	7,740
10-16	7:00 P. M.	12,000	3,610	730	500	4,840	7,160
10-17	9:00 P. M.	12,000	2,420	730	500	3,650	8,350
10-19	1:00 A. M.	11,000	1,870	730	1,000	3,600	7,400
10-25	8:00 P. M.	12,000	3,510	730	500	4,740	7,260
10-26	11:00 P. M.	11,000	2,270	730	2,000	5,000	6,000
10-27	8:00 P. M.	12,000	3,430	730	1,000	5,160	6,840
10-31	5:30 P. M.	10,000	2,250	730	1,500	4,480	5,520
11-1	7:00 P. M.	13,000	3,530	730	500	4,760	8,240
11-4	8:30 P. M.	12,000	3,500	730	500	4,530	7,470
11-5	5:30 P. M.	13,000	3,980	730	1,500	6,210	6,790
11-12	8:00 P. M.	12,000	3,660	730	500	4,820	7,110
11-16	7:00 P. M.	16,000	3,620	730	1,000	5,350	10,650
11-24	8:00 A. M.	10,000	2,650	730	2,000	5,380	4,620
11-27	11:00 P. M.	10,000	2,140	730	500	3,370	6,630
12-1	6:30 P. M.	13,000	3,730	730	500	4,960	8,040
12-9	10:30 P. M.	11,000	2,400	920	500	3,820	7,180
12-10	9:30 P. M.	12,000	2,990	920	500	4,410	7,590
12-15	8:30 P. M.	10,000	3,700	920	500	5,120	4,880
12-15	9:00 P. M.	10,000	3,430	920	1,000	5,350	4,650

Year Month Day	Hour	Received from J. C. P. & L. Co. Kws.	Mechanics St. Substation Load: Local Load Kws.	General Cable Load Kws.	Staten Island Edison Corp. Kws.	Total Load at Mechanics Kws.	Surplus Power at Mechanics Kws.
12-15	9:30 P. M.	10,000	2,950	730	500	4,180	5,820
12-15	10:00 P. M.	11,000	2,700	920	500	4,120	6,880
12-16	12:00 M.	11,000	2,830	1,830	500	5,160	5,840
12-16	12:30 P. M.	14,000	2,420	1,650	500	4,570	9,430
12-16	1:00 P. M.	11,000	3,000	1,100	500	4,600	6,400
12-17	7:30 A. M.	13,000	2,040	730	1,000	3,770	9,230
12-20	9:30 P. M.	13,000	3,330	920	500	4,750	8,250
12-22	10:00 P. M.	13,000	3,080	920	1,000	5,000	8,000
12-23	8:00 P. M.	14,000	3,970	920	1,500	6,390	7,610
1938							
1-6	7:00 P. M.	9,000	3,330	730	500	4,560	4,440
1-6	7:30 P. M.	10,000	3,250	920	500	4,670	5,330
1-10	5:00 P. M.	14,000	3,610	920	2,000	6,530	7,470
1-12	9:00 A. M.	13,000	3,140	1,280	500	4,920	8,080
1-12	9.30 A. M.	12,000	3,480	1,280	500	5,260	6,740
1-18	8:30 P. M.	12,000	3,000	1,280	1,000	5,280	6,720
1-19	3:30 P. M.	11,000	3,250	920	2,000	6,170	4,830
1-19	4:00 P. M.	13,000	3,090	1,100	500	4,690	8,310
1-19	4:30 P. M.	9,000	3,520	1,100	500	5,120	3,880
1-19	5:00 P. M.	9,000	3,630	1,100	500	5,230	3,770

Year Month Day	Hour	Received from J. C. P. & L. Co. Kws.	Local Load Kws.	Mechanics St. Substation Load General Cable Load Kws.	Staten Island Edison Corp. Kws.	Total Load at Mechanics Kws.	Surplus Power at Mechanics Kws.
1-24	11:00 P. M.	10,000	1,910	730	1,000	3,640	6,360
2-3	3:00 P. M.	13,000	3,340	920	1,000	5,260	7,740
2-3	3:30 P. M.	11,000	3,160	920	1,000	5,080	5,920
2-4	10:30 P. M.	10,000	2,250	730	1,000	3,980	6,020
2-4	11:00 P. M.	11,000	1,950	730	1,000	3,680	7,320
2-13	8:30 P. M.	11,000	2,310	730	500	3,540	7,460
2-17	8:30 P. M.	12,000	2,980	2,020	500	5,500	6,500
2-18	7:30 P. M.	12,000	3,430	920	1,000	5,350	6,650
2-18	8:00 P. M.	11,000	3,330	1,280	1,000	5,610	6,390
2-18	8:30 P. M.	10,000	3,130	920	1,500	5,550	4,450
2-18	9:00 P. M.	10,000	2,910	920	500	4,330	5,670
2-23	9:00 A. M.	12,000	3,250	730	1,000	4,950	7,020
2-24	9:30 A. M.	12,000	3,190	1,280	500	4,970	7,030
2-28	7:30 P. M.	10,000	3,230	730	500	4,460	6,540
3-9	9:30 P. M.	10,000	2,710	1,280	500	4,490	5,510
3-11	9:00 P. M.	11,000	2,990	1,280	1,000	5,270	5,730
3-16	9:00 P. M.	12,000	2,850	1,100	1,000	4,930	7,050
3-16	1:00 P. M.	12,000	3,120	1,650	500	5,270	6,730
3-22	9:00 A. M.	10,000	3,000	1,100	500	4,600	5,400
3-22	9:30 A. M.	11,000	3,170	1,280	500	4,950	6,050

Mechanics St. Substation Load

Year Month Day	Hour	Received from J. C. P. & L. Co. Kws.	Local Load Kws.	General Cable Load Kws.	Staten Island Edison Corp. Kws.	Total Load at Mechanics Kws.	Surplus Power at Mechanics Kws.
3-22	10:00 A. M.	13,000	3,270	1,280	500	5,050	7,950
3-31	3:00 P. M.	11,000	3,460	1,280	1,500	6,180	4,820
3-31	3:30 P. M.	9,000	3,430	1,280	1,500	6,210	2,790
3-31	4:00 P. M.	7,000	3,540	920	1,000	5,460	1,540
3-31	4:30 P. M.	9,000	3,140	920	1,000	6,060	3,940
3-31	5:00 P. M.	10,000	2,960	920	500	4,380	5,620
4-6	3:00 P. M.	11,000	3,620	1,100	1,000	5,720	5,280
4-6	3:30 P. M.	11,000	3,510	1,100	500	5,110	5,890
4-7	8:30 A. M.	11,000	2,720	920	500	4,140	6,860
4-11	6:00 P. M.	9,000	2,310	1,100	2,500	5,910	3,090
4-18	6:30 P. M.	10,000	2,610	730	500	3,840	6,160
4-26	11:30 A. M.	11,000	3,350	1,650	500	5,600	5,500
4-27	10:30 A. M.	12,000	3,200	1,650	500	5,350	6,650
4-27	11:00 A. M.	9,000	3,200	1,650	1,500	6,350	2,650
4-27	11:30 A. M.	11,000	3,160	1,650	500	5,310	5,690
5-3	3:00 P. M.	10,000	3,490	2,930	1,000	7,420	2,580
5-3	3:30 P. M.	10,000	3,420	2,750	1,000	7,170	2,830
5-4	2:00 P. M.	10,000	3,360	1,280	500	5,140	4,860
5-4	2:30 P. M.	12,000	3,190	1,280	500	4,970	7,030
5-4	3:00 P. M.	12,000	3,290	1,280	1,000	5,570	6,430

Year Month Day	Hour	Received from J.C.P. & L. Co. Kws.	Local Load Kws.	Mechanics St. Substation Load: General Cable Load Kws.	Staten Island Edison Corp. Kws.	Total Load at Mechanics Kws.	Surplus Power at Mechanics Kws.
5-10	3:00 P. M.	11,000	3,300	1,660	500	5,450	5,550
5-10	3:30 P. M.	10,000	3,340	1,470	1,000	5,810	4,190
5-10	4:00 P. M.	10,000	3,160	1,280	500	4,940	5,060
5-10	4:30 P. M.	11,000	2,940	920	2,500	6,360	4,640
5-10	5:00 P. M.	9,000	2,780	920	500	4,200	4,800
5-11	2:00 P. M.	11,000	3,180	1,850	1,000	6,010	4,990
5-11	2:30 P. M.	11,000	3,200	1,280	1,000	5,480	5,520
5-11	3:00 P. M.	11,000	3,240	1,830	1,000	6,070	4,930
5-11	3:30 P. M.	14,000	3,040	1,280	1,000	5,320	8,680
5-12	10:00 A. M.	12,000	3,300	1,280	1,500	6,080	5,920
5-18	11:30 A. M.	13,000	3,300	1,100	1,500	5,900	7,100
5-19	4:30 P. M.	13,000	2,890	730	1,000	4,620	8,380
5-20	10:30 A. M.	16,000	3,070	1,470	1,000	5,540	10,460
5-20	11:00 A. M.	14,000	3,140	1,650	500	5,290	8,710
5-20	11:30 A. M.	13,000	3,250	1,280	1,500	6,030	6,970
5-23	10:30 A. M.	16,000	3,340	730	500	4,570	11,430
5-23	11:00 A. M.	12,000	3,340	730	1,000	5,070	6,930
5-23	11:30 A. M.	15,000	3,410	730	1,500	5,640	9,360
5-31	9:30 A. M.	12,000	3,610	1,280	1,000	5,790	6,210
6-1	9:30 A. M.	14,000	2,880	1,470	2,000	6,350	7,650

Year Month Day	Hour	Received from J.C.P. & L. Co. Kws.	Local Load Kws.	Mechanics St. Substation Load: General Cable Load Kws.	Staten Island Edison Corp. Kws.	Total Load at Mechanics Kws.	Surplus Power at Mechanics Kws.
6-2	8:30 A. M.	11,000	2,590	1,470	1,000	5,060	5,940
6-7	4:30 P. M.	14,000	3,040	1,280	500	4,820	9,180
6-8	11:00 A. M.	12,000	3,440	1,830	500	5,770	6,230
6-10	8:00 A. M.	12,000	2,340	920	500	3,760	8,240
6-12	11:00 P. M.	13,000	2,090	730	500	3,320	9,680
6-13	12:00 M.	12,000	2,680	920	1,500	5,100	8,900
6-14	9:00 A. M.	12,000	3,340	1,100	500	4,940	7,060
6-15	8:30 A. M.	14,000	3,050	1,830	500	5,380	8,620
6-16	2:30 P. M.	13,000	3,460	1,470	2,000	6,930	6,070
6-20	9:30 A. M.	12,000	3,670	920	1,500	6,090	5,910
6-22	4:00 P. M.	13,000	3,270	1,100	1,500	5,870	7,130
6-23	9:00 A. M.	14,000	3,210	920	1,500	5,630	8,370
6-24	9:00 A. M.	12,000	3,200	1,280	2,000	6,480	5,520
6-25	4:00 P. M.	13,000	2,400	730	500	3,630	9,370
6-26	10:30 A. M.	14,000	1,620	730	1,000	3,350	10,650
7-11	10:30 P. M.	10,000	2,630	730	500	3,860	6,140
7-12	5:00 P. M.	12,000	2,700	730	1,000	4,430	7,570
7-14	2:30 P. M.	11,000	3,840	1,650	500	5,990	5,010
7-18	5:00 P. M.	11,000	2,900	730	500	4,130	6,870
7-19	12:30 P. M.	14,000	2,630	1,100	500	4,230	9,770

Mechanics St. Substation Load

Year Month Day	Hour	Received from J.C.P. & L. Co. Kws.	Local Load Kws.	General Cable Load Kws.	Staten Island Edison Corp. Kws.	Total Load at Mechanics Kws.	Surplus Power at Mechanics Kws.
7-25	3:00 P. M.	14,000	3,750	1,470	500	5,720	8,280
7-25	3:30 P. M.	12,000	3,550	1,280	500	5,330	6,670
7-25	4:00 P. M.	11,000	3,630	920	1,000	5,550	5,450
8-1	7:00 A. M.	10,000	1,760	730	2,000	4,490	5,510
8-5	2:00 P. M.	12,000	3,740	730	1,500	5,970	6,030
8-17	8:00 A. M.	12,000	2,950	1,280	3,000	7,230	4,770
8-26	4:30 P. M.	12,000	3,070	730	2,000	5,800	6,200
8-26	5:00 P. M.	11,000	2,650	730	2,000	5,380	5,620
8-28	10:30 P. M.	11,000	2,240	730	1,500	4,470	6,530
8-29	1:30 P. M.	12,000	3,530	1,470	3,000	8,000	4,000
9-2	9:00 A. M.	10,000	2,860	730	500	4,090	5,910
9-5	11:00 P. M.	11,000	2,020	730	500	3,250	7,750
9-6	2:00 P. M.	11,000	3,560	1,100	2,000	6,660	4,340

Commission's Exhibit No. 12

COMMISSION'S EXHIBIT NO. 13

PUBLIC SERVICE ELECTRIC AND GAS COMPANY
ENERGY SUPPLY AND LOADS AT THE SUBSTATIONS OF THE CENTRAL DIVISION
Taken from Substation Log Sheets

Month	Day	Hour	Energy Received from Jersey Central Power & Light Co. Kws.	Mechanics St. Substation: Local Load Kva.	Mechanics St. Substation: General Cable Coal Load Amps.	Energy Delivered to Staten Island Edison Corp. Kws.	Carteret Substation: Local Load Kva.	Carteret Substation: Foster Wheeler Load Kws.	Carteret Substation: U. S. Metals Load Kws.	Carteret Substation: P. & R. Creosote Load Kws.	Keasbey Substation Load Kva.	Rahway Substation Load Kva.	Linden Substation Load Kva.	Tremley Substation Load Kva.	Metuchen Substation Local Load 4 Kv. Kva.
1937															
January	26	8:30 P. M.	19,000	3,973	135	1,000	2,600	640	1,200	130	1,630	3,900		1,325	1,360
January	26	9:00 P. M.	19,000	3,635	120	1,500	2,500	680	1,150	120	1,630	3,650		1,300	1,320
January	26	9:30 P. M.	21,000	3,457	135	1,000	2,400	660	1,100	130	1,660	3,500		1,325	1,220
January	26	10:00 P. M.	20,000	3,277	120	2,500	2,100	580	1,150	120	1,450	3,200		1,400	1,180
August	5	7:00 A. M.	14,000	2,819	60	1,000	1,500	240	1,000	107	1,100	1,600	2,750	800	680
August	5	7:30 A. M.	11,000	3,450	60	1,000	1,600	720	1,050	122	1,180	1,920	3,100	875	600
August	5	8:00 A. M.	10,000	4,834	60	1,000	1,800	960	1,100	130	1,490	2,880	3,200	1,100	640
November	16	7:00 P. M.	16,000	5,100	60	1,000	2,450	620	1,390	160	1,500	4,550	3,500	1,500	1,640
December	15	8:30 P. M.	10,000	5,217	75	500	2,750	680	1,300	130	1,500	4,250	750	1,600	1,560
December	15	9:00 P. M.	10,000	4,838	75	1,000	2,650	690	1,300	70	1,360	4,100	750	1,600	1,500
December	15	9:30 P. M.	10,000	4,160	60	500	2,400	650	1,360	70	1,290	3,700	750	1,600	1,400
December	15	10:00 P. M.	11,000	3,805	75	500	2,350	600	1,200	60	1,240	3,500	750	1,600	1,340
1938															
March	22	9:00 A. M.	10,000	4,231	90	500	2,350	1,020	1,540	160	1,930	3,850	2,850	1,025	1,330
March	22	9:30 A. M.	11,000	4,464	105	500	2,600	1,150	1,540	140	1,850	3,900	2,850	1,025	1,330
March	22	10:00 A. M.	13,000	4,600	105	500	2,750	1,040	1,540	110	2,050	3,950	2,850	1,025	1,420
May	20	10:30 A. M.	16,000	4,325	120	1,000	2,200	1,160	1,340	120	1,720	3,450	3,000	1,200	1,340
May	20	11:00 A. M.	14,000	4,425	135	500	2,200	970	1,300	120	1,750	3,600	3,000	1,250	1,270
May	20	11:30 A. M.	13,000	4,575	105	1,000	2,350	1,000	1,250	120	1,850	3,550	3,000	1,200	1,250
May	23	10:30 A. M.	16,000	4,700	60	500	2,500	1,020	1,480	120	1,790	3,800	3,125	1,400	1,620
May	23	11:00 A. M.	12,000	4,700	60	1,000	2,400	1,080	1,440	120	1,740	3,750	3,125	1,400	1,680
May	23	11:30 A. M.	15,000	4,800	60	1,500	2,500	1,100	1,530	120	1,600	3,750	3,125	1,350	1,640
July	25	3:00 P. M.	14,000	5,275	120	500	2,000	1,150	1,440	120	2,200	4,600	900	1,500	1,340
July	25	3:30 P. M.	12,000	5,000	105	500	2,200	1,070	1,440	90	2,060	4,700	600	1,400	1,320
July	25	4:00 P. M.	11,000	5,115	75	1,000	1,950	920	1,340	80	1,920	4,300	600	1,300	1,400

COMMISSION'S EXHIBIT NO. 14

PUBLIC SERVICE ELECTRIC AND GAS COMPANY

Power factors at the substations of the Central Division at time of ordinary heavy load condition.

Mechanic St. Substation	—	4 kv. load	— 71%
Mechanic St. Substation	—	General cable	— 80%
Carteret Substation	—	local load	— 83%
Metuchen Substation	—	4 kv. load	— 85%
Keasby Substation	—	local load	— 63%
Tremley Substation	—	local load	— 78%
Linden Substation	—	local load	— 90%
Rahway Substation	—	local load	— 85%

COMMISSION'S EXHIBIT NO. 15

PUBLIC SERVICE ELECTRIC AND GAS COMPANY

Line impedances in the Central Division

Line Designation			*Length*		*Impedance*
From	*To*	*Line No.*	*Miles*		*Ohms*
Mechanics St.	Carteret	Q 199	5.65	3.80	∠59.6°
Mechanics St.	Keasbey	B 184	1.74	1.12	∠68.6°
Mechanics St.	Metuchen	A 183	5.51	3.81	∠68.1°
Mechanics St.	Metuchen	N 196	5.19	4.39	∠60.9°
Carteret	Tremley	P 198	3.32	2.17	∠68.9°
Tremley	Linden	N 222	1.98	1.48	∠71.4°
Linden	Rahway	R 200	2.25	1.39	∠68.4°
Rahway	Metuchen	J 244	9.76	6.64	∠69.9°
Metuchen	Carteret	V 230	8.36	5.80	∠70.3°
Metuchen	Keasbey	M 195	3.58	2.69	∠56.4°

COMMISSION'S COUNSEL EXHIBIT NO. 16A

(Revised table—supersedes Exhibit 16)

SUMMARY TABLE SHOWING DISPOSITION OF POWER RECEIVED AT THE MECHANIC STREET SUBSTATION FROM THE JERSEY CENTRAL POWER AND LIGHT COMPANY

(All Data in Kilowatts)

Date	Hour	Power Supplied By J. C. P. & L. Co. (to Mechanic St.)	Load at Mechanic St. (Inc. S. I. E. Corp.) (1)	Remainder (Col. 3 minus Col. 4)	Disposition of Remainder (Calculated)						Percent of Total Power Supplied to Mechanic St. By-		Total Network Requirements
					To (or from) Metuchen			To Keasby	To Carteret				
					Line A-183	Line H-196	Total	Line B-184	Line Q-199	Total	J. C. P. & L. Co.	Metuchen	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Jan. 26, 1937	8:30 P. M.	19,000	6,340	12,660	(Not calculated since the supply from J. C. P. & L.						100.		17,000
Jan. 26, 1937	9:00 P. M.	19,000	6,338	12,662	(Co. was in excess of the total power requirements						100.		16,629
Jan. 26, 1937	9:30 P. M.	21,000	6,023	14,977	(of the network. At these instants some of the power						100.		15,997
Jan. 26, 1937	10:00 P. M.	20,000	7,665	12,335	(delivered to Mechanic Street by the J. C. P. & L. Co.)						100.		16,987
					(was transmitted to loads outside the network								
Aug. 5, 1937	7:00 A. M.	14,000	5,121	8,879	(over these lines.						100.		13,443
Aug. 5, 1937	7:30 A. M.	11,000	4,658	6,342	735	638	1,373	1,260	3,710	6,343	100.		14,236
Aug. 5, 1937	8:00 A. M.	10,000	5,130	4,870	86	75	161	749	3,960	4,870	100.		16,483
Nov. 16, 1937	7:00 P. M.	16,000	5,429	10,571	1,514	1,314	2,828	2,182	5,562	10,572	100.		20,160
Dec. 15, 1937	8:30 P. M.	10,000	6,615	3,385	* 380	* 330	* 710	288	3,805	3,383	93.37	6.63	18,795
Dec. 15, 1937	9:00 P. M.	10,000	6,656	3,344	* 345	* 300	* 645	260	3,729	3,344	93.94	6.06	18,456
Dec. 15, 1937	9:30 P. M.	10,000	5,813	4,187	* 28	* 24	* 52	546	3,693	4,187	99.48	.52	16,956
Dec. 15, 1937	10:00 P. M.	11,000	5,531	5,469	414	359	773	965	3,731	5,469	100.		16,160
March 22, 1938	9:00 A. M.	10,000	5,621	4,379	* 296	* 257	* 553	562	4,372	4,381	94.76	5.24	19,277
March 22, 1938	9:30 A. M.	11,000	6,033	4,967	* 163	* 141	* 304	660	4,610	4,966	97.31	2.69	19,998
March 22, 1938	10:00 A. M.	13,000	5,891	7,109	446	387	833	1,358	4,918	7,109	100.		20,086
May 20, 1938	10:30 A. M.	16,000	6,290	9,710	1,346	1,168	2,514	2,111	5,083	9,708	100.		19,528
May 20, 1938	11:00 A. M.	14,000	6,003	7,997	854	741	1,595	1,633	4,770	7,998	100.		19,137
May 20, 1938	11:30 A. M.	13,000	7,081	5,919	215	187	402	1,038	4,478	5,918	100.		20,285
May 23, 1938	10:30 A. M.	16,000	4,042	11,958	1,913	1,660	3,573	2,709	5,675	11,957	100.		18,377
May 23, 1938	11:00 A. M.	12,000	4,542	7,458	595	517	1,112	1,369	4,978	7,459	100.		18,791
May 23, 1938	11:30 A. M.	15,000	5,112	9,888	1,312	1,138	2,450	2,024	5,414	9,888	100.		19,393
July 25, 1938	3:00 P. M.	14,000	6,455	7,545	735	638	1,373	1,714	4,457	7,544	100.		19,240
July 25, 1938	3:30 P. M.	12,000	5,415	6,585	490	425	915	1,406	4,262	6,583	100.		17,888
July 25, 1938	4:00 P. M.	11,000	5,323	5,677	348	302	650	1,202	3,826	5,678	100.		16,891

(1) General Cable Load Increased by 5% for Losses.

* Indicates Flow from Metuchen to Mechanic Street.

COMMISSION'S EXHIBIT NO. 17

PUBLIC SERVICE ELECTRIC AND GAS COMPANY
Mechanic St. Substation
Instrument Readings Recorded on Substation Log Sheets

Year Month Day	Hour	J.C.P. & L. Co. OUT Kws.	S.I.Ed. Corp. IN Kws.	Mechanic St. Sub. Local Load Kva.	Mechanic St. Sub. General Cable Load Amps.[1]	Carteret Substation Line Q 199 Amps.[2]	Keasbey Substation Line B 184 Amps.[2]	Metuchen Sub. Line A 183 Amps.[2]	Metuchen Sub. Line N 196 Amps.[2]
1938									
4-3	8:30 P. M.	1,000	1,500	3,505	60	180	120	150	120
4-14	7:00 A. M.	1,000	1,000	2,057	60	90	0	0	330
4-15	3:30 P. M.	1,000	1,500	3,962	60	210	120	150	120
4-21	6:30 P. M.	1,000	2,000	3,607	105	150	180	225	195
4-25	7:30 A. M.	1,000	2,000	2,344	60	180	120	150	150
4-28	6:00 P. M.	1,000	2,000	2,847	60	150	150	210	180
5-4	12:00 N.	1,000	2,500	2,717	60	180	90	150	150
5-8	6:00 A. M.	1,000	2,000	1,739	60	120	60	150	120
7-2	1:00 P. M.	1,000	500	3,075	60	150	90	150	120
7-3	2:00 A. M.	1,000	500	2,413	60	150	75	150	90
7-5	6:30 A. M.	1,000	1,500	1,657	60	120	90	150	150
7-21	7:30 A. M.	1,000	1,000	2,520	60	150	150	150	150
7-25	8:00 P. M.	1,000	2,000	3,200	75	150	120	150	120
7-28	8:00 P. M.	1,000	1,500	3,300	75	150	90	150	120

Year Month Day	Hour	J. C. P. & L. Co. OUT Kws.	S. I. Ed. Corp. IN Kws.	Mechanic St. Sub. Local Load Kva.	Mechanic St. Sub. General Cable Load Amps.[1]	Carteret Substation Line Q 199 Amps.[2]	Keasbey Substation Line B 184 Amps.[2]	Metuchen Sub. Line A 183 Amps.[2]	Metuchen Sub. Line N 196 Amps.[2]
7-30	1:30 P. M.	1,000	1,500	3,225	60	150	60	150	120
8-2	2:00 A. M.	1,000	1,500	2,350	60	120	120	150	150
8-12	8:00 A. M.	1,000	2,000	3,918	60	210	60	120	120

[1] Sum of 6 ammeter readings: Three phases and two circuits.
[2] Sum of 3 ammeter readings.

COMMISSION'S EXHIBIT NO. 17A

PUBLIC SERVICE ELECTRIC AND GAS COMPANY
Mechanic St. Substation
Instrument Readings Recorded on Substation Log Sheets

Year Month Day	Hour	J.C.P. & L. Co. OUT Kws.	S.I.Ed. Corp. IN Kws.	Mechanic St. Sub. Local Load Kva.	Mechanic St. Sub. General Cable Load Amps.[1]	Carteret Substation Line Q 199 Amps.[2]	Kearsby Substation Line B 184 Amps.[2]	Metuchen Sub. Line A 183 Amps.[2]	Metuchen Sub. Line N 196 Amps.[2]
1937									
1-13	3:00 A. M.	1,000	1,000	1,778	60	90	60	90	60
1-22	3:00 A. M.	1,000	500	1,754	105	90	60	120	90
2-12	7:00 A. M.	2,000	2,000	2,458	75	90	60	90	60
2-14	5:30 P. M.	1,000	2,000	2,296	60	90	60	90	60
2-22	3:30 P. M.	1,000	1,000	3,225	60	120	60	90	60
3-14	1:30 P. M.	1,000	2,000	2,176	60	90	90	60	60
3-14	2:00 P. M.	1,000	1,500	2,304	60	120	60	90	60
3-14	2:30 P. M.	1,000	500	2,355	60	120	60	90	60
3-28	11:30 A. M.	1,000	1,000	2,057	60	90	60	90	45
3-29	6:30 A. M.	1,000	2,000	1,792	60	120	60	90	60
4-11	6:30 A. M.	1,000	1,000	1,778	60	120	120	150	90
4-13	5:00 A. M.	1,000	1,000	1,675	105	150	90	120	90
4-14	7:00 A. M.	1,000	2,000	1,800	75	150	90	150	120
5-2	3:00 A. M.	1,000	500	2,225	60	150	90	150	120

Commission's Exhibit No. 17A

Year Month Day	Hour	J.C.P. & L. Co. OUT Kws.	S.I.Ed. Corp. IN Kws.	Mechanic St. Sub. Local Load Kva.	Mechanic St. Sub. General Cable Load Amps.[1]	Carteret Substation Line Q 199 Amps.[2]	Keasby Substation Line B 184 Amps.[2]	Metuchen Sub. Line A 183 Amps.[2]	Metuchen Sub. Line N 196 Amps.[2]
5-2	4:00 A. M.	1,000	500	2,150	60	150	75	120	75
5-3	6:00 P. M.	1,000	1,500	3,200	120	150	150	180	165
5-18	2:00 A. M.	1,000	1,000	2,475	75	150	90	120	120
5-21	7:30 A. M.	1,000	2,000	3,174	60	210	60	120	90
5-27	5:00 A. M.	1,000	1,000	2,000	60	120	90	150	120
5-27	6:30 A. M.	1,000	1,000	2,150	75	120	120	150	120
5-31	6:30 A. M.	2,000	2,000	1,956	60	150	90	150	90
6-20	6:30 P. M.	1,000	1,000	1,657	60	90	75	150	90
6-20	8:00 P. M.	1,000	1,000	2,870	60	120	90	165	150
6-24	8:30 P. M.	1,000	1,000	3,658	120	120	150	240	210
6-26	8:00 A. M.	1,000	2,000	3,226	75	90	150	240	210
6-27	9:00 A. M.	1,000	500	2,219	60	60	150	150	150
6-27	9:30 A. M.	1,000	1,000	2,489	60	60	150	150	150

[1] Sum of 6 ammeter readings: Three phases and two circuits.

[2] Sum of 3 ammeter readings.

COMMISSION'S EXHIBIT NO. 18

PUBLIC SERVICE ELECTRIC AND GAS COMPANY
Mechanic St. Substation
Substation Load and Supply

Month	Day	Hour	Received from Staten Island Edison Corp. Kws.	Energy Deliveries: Delivered to J. C. P. & L. Co. Kws.	Local Load Kws.	General Cable Load Kws.	Total Kws.	Excess Load Over Supply at Mechanics St. Kws.
1938								
April	3	8:30 P. M.	1,500	1,000	2,490	730	4,220	2,720
April	14	7:00 A. M.	1,000	1,000	1,460	730	3,190	2,190
April	15	3:30 P. M.	1,500	1,000	2,810	730	4,540	3,040
April	21	6:30 P. M.	2,000	1,000	2,560	1,280	4,840	2,840
April	25	7:30 A. M.	2,000	1,000	1,660	730	3,390	1,390
April	28	6:00 P. M.	2,000	1,000	2,020	730	3,750	1,750
May	4	12:00 N.	2,500	1,000	1,930	730	3,660	1,160
May	8	6:00 A. M.	2,000	1,000	1,230	730	2,960	960
July	2	1:00 P. M.	500	1,000	2,180	730	3,910	3,410
July	3	2:00 A. M.	500	1,000	1,710	730	3,440	2,940
July	5	6:30 A. M.	1,500	1,000	1,180	730	2,910	1,410
July	21	7:30 A. M.	1,000	1,000	1,790	730	3,520	2,520
July	25	8:00 P. M.	2,000	1,000	2,270	920	4,190	2,190
July	28	8:00 P. M.	1,500	1,000	2,340	920	4,260	2,760

Commission's Exhibit No. 18

Month	Day	Hour	Received from Staten Island Edison Corp. Kws.	Energy Deliveries: Delivered to J. C. P. & L. Co. Kws.	Local Load Kws.	General Cable Load Kws.	Total Kws.	Excess Load Over Supply at Mechanics St. Kws.
July	30	1:30 P. M.	1,500	1,000	2,290	730	4,020	2,520
August	2	2:00 A. M.	1,500	1,000	1,670	730	3,400	1,900
August	12	8:00 A. M.	2,000	1,000	2,780	730	4,510	2,510

COMMISSION'S EXHIBIT NO. 18A

PUBLIC SERVICE ELECTRIC AND GAS COMPANY
Mechanic Street Substation
Substation Load and Supply

Year Month Day	Hour	Received from Staten Island Edison Corp. Kws.	Energy Deliveries: Delivered to J. C. P. & L. Co. Kws.	Local Load Kws.	General Cable Load Kws.	Total Kws.	Excess Load over Supply at Mechanic St. Kws.
1937							
1-13	3:00 A. M.	1,000	1,000	1,262	730	2,992	1,992
1-22	3:00 A. M.	500	1,000	1,245	1,280	3,525	3,025
2-12	7:00 A. M.	2,000	2,000	1,745	920	4,665	2,665
2-14	5:30 P. M.	2,000	1,000	1,630	730	3,360	1,360
2-22	3:30 P. M.	1,000	1,000	2,290	730	4,020	3,020
3-14	1:30 P. M.	2,000	1,000	1,545	730	3,275	1,275
3-14	2:00 P. M.	1,500	1,000	1,636	730	3,366	1,866

Year Month Day	Hour	Received from Staten Island Edison Corp. Kws.	Energy Deliveries: Delivered to J. C. P. & L. Co. Kws.	Local Load Kws.	General Cable Load Kws.	Total Kws.	Excess Load over Supply at Mechanic St. Kws.
3-14	2:30 P. M.	500	1,000	1,672	730	3,402	2,902
3-28	11:30 A. M.	1,000	1,000	1,460	730	3,190	2,190
3-29	6:30 A. M.	2,000	1,000	1,272	730	3,002	1,002
4-11	6:30 A. M.	1,000	1,000	1,262	730	2,992	1,992
4-13	5:00 A. M.	1,000	1,000	1,189	1,280	3,469	2,469
4-14	7:00 A. M.	2,000	1,000	1,278	920	3,198	1,198
5-2	3:00 A. M.	500	1,000	1,580	730	3,310	2,810
5-2	4:00 A. M.	500	1,000	1,527	730	3,257	2,757
5-3	6:00 P. M.	1,500	1,000	2,272	1,470	4,742	3,242
5-18	2:00 A. M.	1,000	1,000	1,757	920	3,677	2,677
5-21	7:30 A. M.	2,000	1,000	2,253	730	3,983	1,983
5-27	5:00 A. M.	1,000	1,000	1,420	730	3,150	2,150
5-27	6:30 A. M.	1,000	1,000	1,527	920	3,447	2,447
5-31	6:30 A. M.	2,000	2,000	1,389	730	4,119	2,119
6-20	6:30 P. M.	1,000	1,000	1,894	730	3,624	2,624
6-20	8:00 P. M.	1,000	1,000	2,038	730	3,768	2,768
6-24	8:30 P. M.	1,000	1,000	2,597	1,470	5,067	4,067
6-26	8:00 A. M.	2,000	1,000	2,290	920	4,210	2,210
6-27	9:00 A. M.	500	1,000	1,575	730	3,305	2,805
6-27	9:30 A. M.	1,000	1,000	1,767	730	3,497	2,497

COMMISSION'S EXHIBIT NO. 19

PUBLIC SERVICE ELECTRIC AND GAS COMPANY

80 Park Place,
Newark, New Jersey,
April 28, 1938.

Mr. R. H. Barclay, Regional Director,
Federal Power Commission,
Federal Building,
641 Washington Street,
New York, N. Y.

Dear Sir:

In accordance with your request of Mr. J. T. Barron, Vice President in Charge of Electric Operation, there are enclosed tabulations showing interchange between Staten Island Edison Corporation and the Mechanic Street substation of Public Service Electric and Gas Company, during the year 1937 and the first three months of 1938.

No current generated at the Perth Amboy generating station during the period covering the year 1937 and the three months in 1938 was transmitted to the Mechanic Street substation.

Yours very truly,
W. J. Reynolds,
(Wm. J. Reynolds)
Assistant Comptroller.

(Stamped in upper right-hand corner):
Federal Power Commission
Received
Apr. 30, 1938
(Stamped in upper right-hand corner):
Federal Power Commission
Received
Apr. 29, 1938
New York—N. Y.

Interchange between Staten Island Edison Corporation and Public Service Electric and Gas Company
Kilowatt Hours

	January, 1937		February, 1937		March, 1937	
Date	S. I. E. to P. S.	P. S. to S. I. E.	S. I. E. to P. S.	P. S. to S. I. E.	S. I. E. to P. S.	P. S. to S. I. E.
1	12,000	5,700	13,800	10,500	9,800	8,000
2	6,100	9,500	5,100	24,300	8,500	10,300
3	5,900	8,600	8,200	10,900	12,100	7,600
4	11,200	5,700	12,600	8,100	9,500	9,500
5	7,500	9,800	11,500	9,400	8,700	9,300
6	7,300	10,200	17,800	9,500	11,600	5,000
7	9,100	9,400	13,000	10,800	9,300	5,000
8	7,300	8,600	7,800	15,800	9,500	9,000
9	4,800	12,800	12,200	10,500	9,600	9,700
10	7,800	10,100	8,800	10,100	11,300	8,300
11	9,100	8,000	10,800	9,900	6,500	12,100
12	6,500	12,800	17,100	11,900	13,600	6,800
13	10,300	10,800	7,700	8,100	7,300	10,200
14	8,100	11,300	12,600	12,600	7,400	9,700
15	6,200	14,100	9,300	8,700	6,000	14,000
16	8,100	8,900	5,400	13,600	8,700	8,600
17	7,800	6,800	18,200	5,300	8,800	7,000
18	8,400	7,500	6,800	12,500	9,200	7,900
19	8,000	7,800	8,600	8,200	9,200	9,100
20	6,200	8,500	9,500	5,800	6,800	10,300
21	7,800	8,700	7,100	7,500	7,600	6,500
22	8,900	7,300	9,300	9,600	6,300	9,000
23	5,100	8,500	8,500	12,600	7,500	9,100
24	8,600	5,400	8,100	10,200	7,500	9,400
25	12,500	5,400	7,600	9,600	9,500	8,400
26	7,500	10,200	8,700	9,500	9,800	8,500
27	8,900	7,100	11,100	8,600	9,900	8,900
28	8,900	7,700	10,500	4,700	9,900	4,600
29	10,300	7,500	—	—	9,100	7,500
30	10,000	6,400	—	—	7,900	7,900
31	7,200	6,700	—	—	10,100	7,400
Total	253,400	267,800	287,700	288,800	278,500	264,600

Date	April, 1937 S.I.E. to P.S.	April, 1937 P.S. to S.I.E.	May, 1937 S.I.E. to P.S.	May, 1937 P.S. to S.I.E.	June, 1937 S.I.E. to P.S.	June, 1937 P.S. to S.I.E.
1	9,700	9,300	8,200	7,300	7,000	10,000
2	9,700	7,900	7,200	4,600	6,000	20,000
3	6,200	10,000	7,400	8,100	6,000	10,000
4	8,000	5,900	6,100	7,200	9,000	10,000
5	5,800	12,000	0	0	6,000	10,000
6	8,900	10,600	0	0	7,000	7,000
7	12,100	8,300	0	0	8,000	11,000
8	7,400	10,400	0	0	9,000	10,000
9	6,700	10,200	5,400	4,800	9,000	10,000
10	6,700	9,900	10,000	8,000	10,000	7,000
11	11,300	5,800	9,000	11,000	12,000	6,000
12	8,900	8,700	12,000	6,000	9,000	5,000
13	6,600	9,200	6,000	13,000	6,000	9,000
14	7,800	8,900	9,000	9,000	8,000	8,000
15	6,600	7,200	9,000	8,000	12,000	7,000
16	8,200	9,100	9,000	5,000	9,000	8,000
17	9,600	8,200	10,000	7,000	8,000	8,000
18	6,400	6,600	9,000	8,000	9,000	7,000
19	9,600	8,200	8,000	10,000	7,000	8,000
20	7,600	13,000	11,000	8,000	8,000	9,000
21	7,100	11,600	9,000	7,000	9,000	7,000
22	8,800	12,600	6,000	10,000	7,000	10,000
23	9,900	9,700	7,000	8,000	10,000	7,000
24	9,800	10,400	10,000	8,000	7,000	11,000
25	6,900	4,600	10,000	7,000	8,000	8,000
26	8,200	7,100	9,000	9,000	9,000	8,000
27	7,400	7,800	8,000	9,000	6,000	7,000
28	9,300	7,200	9,000	10,000	9,000	8,000
29	7,000	12,300	8,000	8,000	10,000	8,000
30	9,100	8,500	7,000	8,000	8,000	11,000
31	—	—	8,000	9,000	—	—
Total	247,300	271,200	227,300	218,000	248,000	265,000

DCL:HMW 4-28-38

Interchange between Staten Island Edison Corporation and Public Service Electric and Gas Company
Kilowatt Hours

	July, 1937		*August, 1937*		*September, 1937*	
Date	*S.I.E. to P.S.*	*P.S. to S.I.E.*	*S.I.E. to P.S.*	*P.S. to S.I.E.*	*S.I.E. to P.S.*	*P.S. to S.I.E.*
1	9,000	8,000	8,000	8,000	8,000	9,000
2	9,000	9,000	9,000	9,000	9,000	8,000
3	8,000	9,000	9,000	9,000	9,000	10,000
4	8,000	7,000	9,000	9,000	6,000	12,000
5	8,000	8,000	8,000	9,000	8,000	9,000
6	8,000	8,000	9,000	9,000	6,000	7,000
7	7,000	11,000	7,000	7,000	10,000	8,000
8	8,000	9,000	9,000	8,000	11,000	8,000
9	9,000	11,000	6,000	10,000	8,000	10,000
10	9,000	8,000	7,000	9,000	9,000	8,000
11	6,000	11,000	7,000	8,000	10,000	10,000
12	5,000	12,000	11,000	7,000	11,000	4,000
13	6,000	15,000	10,000	8,000	9,000	10,000
14	11,000	7,000	10,000	6,000	11,000	9,000
15	12,000	6,000	7,000	12,000	10,000	8,000
16	9,000	11,000	14,000	8,000	6,000	10,000
17	7,000	9,000	8,000	9,000	8,000	12,000
18	10,000	6,000	10,000	10,000	8,000	7,000
19	10,000	8,000	7,000	8,000	7,000	8,000
20	11,000	8,000	7,000	12,000	8,000	7,000
21	8,000	8,000	7,000	10,000	12,000	8,000
22	9,000	9,000	8,000	7,000	12,000	6,000
23	9,000	7,000	13,000	7,000	8,000	9,000
24	10,000	5,000	9,000	9,000	10,000	8,000
25	8,000	8,000	8,000	10,000	8,000	8,000
26	6,000	14,000	9,000	8,000	6,000	8,000
27	13,000	9,000	9,000	9,000	6,000	10,000
28	11,000	8,000	11,000	8,000	7,000	10,000
29	9,000	8,000	11,000	5,000	12,000	8,000
30	11,000	7,000	6,000	13,000	10,000	8,000
31	7,000	9,000	7,000	11,000	—	—
Total	271,000	273,000	270,000	272,000	263,000	257,000

Date	October, 1937 S.I.E. to P.S.	October, 1937 P.S. to S.I.E.	November, 1937 S.I.E. to P.S.	November, 1937 P.S. to S.I.E.	December, 1937 S.I.E. to P.S.	December, 1937 P.S. to S.I.E.
1	5,000	5,000	9,000	9,000	8,000	9,000
2	6,000	9,000	9,000	7,000	6,000	12,000
3	7,000	6,000	12,000	7,000	11,000	7,000
4	8,000	9,000	11,000	7,000	9,000	7,000
5	8,000	9,000	9,000	8,000	7,000	5,000
6	9,000	8,000	7,000	7,000	8,000	10,000
7	8,000	8,000	7,000	6,000	9,000	8,000
8	9,000	8,000	8,000	8,000	10,000	6,000
9	6,000	7,000	10,000	9,000	8,000	8,000
10	6,000	7,000	11,000	9,000	10,000	6,000
11	11,000	8,000	7,000	10,000	6,000	9,000
12	9,000	7,000	5,000	11,000	8,000	4,000
13	10,000	8,000	6,000	9,000	11,000	7,000
14	10,000	6,000	6,000	7,000	10,000	7,000
15	12,000	6,000	7,000	13,000	7,000	8,000
16	10,000	5,000	8,000	9,000	8,000	8,000
17	8,000	7,000	8,000	11,000	11,000	7,000
18	10,000	8,000	7,000	9,000	8,000	8,000
19	5,000	14,000	7,000	9,000	8,000	7,000
20	8,000	9,000	7,000	8,000	14,000	7,000
21	12,000	5,000	5,000	8,000	7,000	9,000
22	8,000	10,000	9,000	8,000	10,000	7,000
23	7,000	9,000	11,000	9,000	8,000	9,000
24	6,000	5,000	9,000	8,000	9,000	8,000
25	8,000	10,000	7,000	5,000	6,000	5,000
26	9,000	8,000	11,000	7,000	7,000	5,000
27	9,000	8,000	7,000	7,000	10,000	9,000
28	8,000	8,000	6,000	1,000	9,000	10,000
29	10,000	6,000	8,000	15,000	8,000	9,000
30	9,000	8,000	12,000	6,000	11,000	5,000
31	4,000	4,000	—	—	10,000	8,000
Total	255,000	235,000	246,000	247,000	272,000	234,000

DCL:HMW 4-28-38

Interchange between Staten Island Edison Corporation and Public Service Electric and Gas Company
Kilowatt Hours

	January, 1938		*February, 1938*		*March, 1938*	
	S.I.E. to P.S.	*P.S. to S.I.E.*	*S.I.E. to P.S.*	*P.S. to S.I.E.*	*S.I.E. to P.S.*	*P.S. to S.I.E.*
Date						
1	4,000	7,000	9,000	8,000	8,000	4,000
2	7,000	7,000	9,000	7,000	15,000	5,000
3	8,000	10,000	7,000	8,000	10,000	6,000
4	8,000	9,000	7,000	8,000	12,000	7,000
5	11,000	7,000	7,000	7,000	4,000	14,000
6	8,000	9,000	7,000	9,000	8,000	11,000
7	8,000	8,000	9,000	8,000	12,000	4,000
8	8,000	6,000	14,000	5,000	8,000	7,000
9	5,000	7,000	12,000	8,000	8,000	7,000
10	7,000	9,000	14,000	5,000	11,000	8,000
11	6,000	8,000	15,000	5,000	6,000	10,000
12	7,000	8,000	8,000	7,000	6,000	8,000
13	7,000	9,000	7,000	9,000	8,000	9,000
14	8,000	6,000	10,000	9,000	5,000	11,000
15	8,000	6,000	11,000	9,000	8,000	7,000
16	8,000	6,000	9,000	9,000	5,000	18,000
17	8,000	10,000	15,000	8,000	10,000	11,000
18	6,000	11,000	14,000	7,000	6,000	4,000
19	9,000	8,000	2,000	18,000	6,000	10,000
20	12,000	7,000	3,000	9,000	8,000	6,000
21	10,000	7,000	12,000	8,000	11,000	6,000
22	8,000	6,000	10,000	7,000	7,000	9,000
23	7,000	6,000	5,000	11,000	12,000	8,000
24	10,000	7,000	9,000	7,000	12,000	9,000
25	8,000	8,000	9,000	6,000	11,000	7,000
26	7,000	8,000	6,000	9,000	7,000	10,000
27	13,000	8,000	4,000	6,000	4,000	9,000
28	9,000	10,000	5,000	12,000	12,000	7,000
29	8,000	8,000	—	—	9,000	10,000
30	5,000	6,000	—	—	4,000	13,000
31	7,000	8,000	—	—	3,000	15,000
Total	245,000	240,000	249,000	229,000	256,000	270,000

DCL:HMW 4-28-38

COMMISSION'S EXHIBIT NO. 20

JERSEY CENTRAL POWER & LIGHT COMPANY
Jersey Central Building
Asbury Park

T. R. Crumley
President

April 27, 1938

(Stamped)
Federal Power Commission
Received
Apr. 28, 1938
New York, N. Y.

(Stamped)
Federal Power Commission
Received
Apr. 29, 1938

Mr. H. R. Barkley, Regional Director,
Federal Power Commission,
641 Washington Street,
New York City.

Dear Sir:

Complying with your request we are enclosing, herewith, a statement showing for each day from January 1, 1937 until April 23, 1938 the amount of energy sold to or purchased from Public Service Electric & Gas Company by Jersey Central Power & Light Company over the interconnection between the South Amboy plant of Jersey Central Power & Light Company and the Mechanic Street substation of Public Service Electric & Gas Company at Perth Amboy, New Jersey.

Very truly yours,
T. R. Crumley,
President.

TRC/sg
Enclosures.

Interchange of Power between Jersey Central Power & Light Company and Public Service Electric & Gas Company. At South Amboy, New Jersey.

Received from P. S. (Metered at Mechanic St. Sub. at Perth Amboy, Covering Uncontrolled Flow)

Delivered to P. S. (Metered at South Amboy Plant)

From January 1, 1937 to April 23, 1938

(Stamped)
Federal Power Commission
Received
Apr. 29, 1938

1937	KWH Received from P. S.	KWH Delivered to P. S.
January	38,800	5,306,000
February	33,300	4,172,000
March	39,200	4,383,000
April	16,800	5,493,000
May	20,600	5,708,000
June	16,300	4,861,000
July	23,300	4,277,000
August	16,100	4,768,000
September	16,700	5,324,000
October	20,300	4,529,000
November	36,800	2,892,000
December	37,400	3,708,000
Total 1937	315,600	55,421,000
1938		
January	30,700	3,718,000
February	25,800	2,961,000
March	30,900	3,461,000
	87,400	10,140,000
	403,000	65,561,000

1937		KWH Received from P. S.	KWH Delivered to P. S.
January	1	2,000	83,000
	2	2,300	103,000
	3	1,100	82,000
	4	0	192,000
	5	0	185,000
	6	800	187,000
	7	2,000	159,000
	8	700	213,000
	9	2,000	144,000
	10	2,500	89,000
	11	2,000	164,000
	12	600	179,000
	13	1,900	182,000
	14	800	188,000
	15	1,300	193,000
	16	1,400	150,000
	17	2,300	82,000
	18	1,100	166,000
	19	300	167,000
	20	400	190,000
	21	100	208,000
	22	1,700	189,000
	23	900	205,000
	24	2,900	102,000
	25	800	205,000
	26	600	256,000
	27	600	287,000
	28	2,700	328,000
	29	0	188,000
	30	600	128,000
	31	2,400	112,000
Total January 1937		38,800	5,306,000

1937		KWH Received from P. S.	KWH Delivered to P. S.
February	1	2,100	172,000
	2	1,100	146,000
	3	2,000	167,000
	4	300	175,000
	5	800	163,000
	6	1,500	118,000
	7	2,400	67,000
	8	2,200	150,000
	9	500	176,000
	10	600	178,000
	11	100	178,000
	12	600	133,000
	13	300	136,000
	14	2,200	70,000
	15	1,100	165,000
	16	500	157,000
	17	1,500	176,000
	18	1,100	193,000
	19	1,100	189,000
	20	1,500	131,000
	21	2,900	82,000
	22	2,900	79,000
	23	1,200	175,000
	24	0	194,000
	25	500	224,000
	26	200	178,000
	27	900	134,000
	28	1,200	66,000
Total February 1937		33,300	4,172,000

KWH RECEIVED FROM AND DELIVERED TO PUBLIC SERVICE ELECTRIC AND GAS COMPANY

1937	KWH Received from P. S.	KWH Delivered to P. S.
March 1	1,600	158,000
2	900	164,000
3	1,500	143,000
4	900	131,000
5	900	155,000
6	1,000	122,000
7	1,600	86,000
8	1,300	153,000
9	1,000	166,000
10	500	176,000
11	700	167,000
12	1,000	179,000
13	1,600	115,000
14	3,200	88,000
15	0	174,000
16	900	161,000
17	0	158,000
18	800	155,000
19	1,000	174,000
20	1,000	185,000
21	2,800	56,000
22	2,600	170,000
23	400	183,000
24	700	155,000
25	1,200	144,000
26	1,800	93,000
27	2,300	76,000
28	3,500	60,000
29	1,300	119,000
30	800	146,000
31	400	171,000
Total March 1937	39,200	4,383,000

1937		KWH Received from P. S.	KWH Delivered to P. S.
April	1	0	249,000
	2	0	228,000
	3	600	204,000
	4	3,000	95,000
	5	1,900	169,000
	6	0	230,000
	7	100	186,000
	8	1,100	190,000
	9	500	174,000
	10	300	194,000
	11	1,500	83,000
	12	300	170,000
	13	1,500	184,000
	14	400	201,000
	15	100	207,000
	16	0	218,000
	17	100	195,000
	18	600	60,000
	19	0	82,000
	20	100	313,000
	21	400	158,000
	22	0	198,000
	23	0	207,000
	24	400	219,000
	25	1,800	97,000
	26	1,000	182,000
	27	1,100	181,000
	28	0	220,000
	29	0	210,000
	30	0	189,000
Total April 1937		16,800	5,493,000

1937		KWH Received from P. S.	KWH Delivered to P. S.
May	1	400	198,000
	2	2,700	70,000
	3	2,200	164,000
	4	0	239,000
	5	0	246,000
	6	0	247,000
	7	0	270,000
	8	800	210,000
	9	200	141,000
	10	0	202,000
	11	0	255,000
	12	400	224,000
	13	100	205,000
	14	0	213,000
	15	700	139,000
	16	2,300	77,000
	17	900	188,000
	18	100	197,000
	19	300	195,000
	20	100	200,000
	21	400	206,000
	22	300	201,000
	23	2,600	83,000
	24	900	181,000
	25	500	217,000
	26	200	186,000
	27	700	173,000
	28	0	190,000
	29	1,300	195,000
	30	1,700	89,000
	31	800	107,000
Total May 1937		20,600	5,708,000

1937		KWH Received from P. S.	KWH Delivered to P. S.
June	1	600	126,000
	2	0	181,000
	3	0	215,000
	4	0	239,000
	5	0	230,000
	6	0	219,000
	7	0	184,000
	8	0	219,000
	9	0	229,000
	10	0	221,000
	11	100	207,000
	12	0	247,000
	13	1,400	113,000
	14	300	194,000
	15	0	200,000
	16	0	215,000
	17	0	199,000
	18	400	197,000
	19	400	116,000
	20	1,700	68,000
	21	1,400	144,000
	22	800	118,000
	23	1,300	99,000
	24	1,200	103,000
	25	1,100	94,000
	26	2,000	65,000
	27	1,800	70,000
	28	900	100,000
	29	900	109,000
	30	0	140,000
Total June 1937		16,300	4,861,000

1937		KWH Received from P. S.	KWH Delivered to P. S.
July	1	800	140,000
	2	300	122,000
	3	2,000	74,000
	4	3,900	60,000
	5	1,400	70,000
	6	700	86,000
	7	900	130,000
	8	200	157,000
	9	700	169,000
	10	2,100	154,000
	11	1,000	126,000
	12	700	137,000
	13	0	190,000
	14	0	158,000
	15	600	135,000
	16	0	159,000
	17	600	138,000
	18	0	157,000
	19	300	96,000
	20	0	142,000
	21	300	153,000
	22	400	159,000
	23	100	167,000
	24	900	106,000
	25	3,000	62,000
	26	1,200	139,000
	27	800	146,000
	28	0	167,000
	29	0	207,000
	30	300	199,000
	31	100	172,000
Total July 1937		23,300	4,277,000

1937		KWH Received from P. S.	KWH Delivered to P. S.
Aug.	1	2,400	61,000
	2	1,300	135,000
	3	0	195,000
	4	200	181,000
	5	100	190,000
	6	0	191,000
	7	0	204,000
	8	500	171,000
	9	400	159,000
	10	0	206,000
	11	100	207,000
	12	0	209,000
	13	200	187,000
	14	1,300	83,000
	15	1,100	74,000
	16	1,000	125,000
	17	0	185,000
	18	0	195,000
	19	0	222,000
	20	0	193,000
	21	100	187,000
	22	600	122,000
	23	1,100	90,000
	24	400	128,000
	25	600	153,000
	26	100	146,000
	27	0	185,000
	28	1,700	64,000
	29	1,500	75,000
	30	900	114,000
	31	500	131,000
Total Aug. 1937		16,100	4,768,000

1937		KWH Received from P. S.	KWH Delivered to P. S.
Sept.	1	1,300	148,000
	2	500	148,000
	3	1,600	132,000
	4	1,400	91,000
	5	800	100,000
	6	500	88,000
	7	500	135,000
	8	200	162,000
	9	100	166,000
	10	0	121,000
	11	1,500	162,000
	12	100	151,000
	13	0	197,000
	14	100	228,000
	15	0	240,000
	16	0	232,000
	17	100	200,000
	18	100	221,000
	19	3,200	109,000
	20	1,900	187,000
	21	100	215,000
	22	0	242,000
	23	800	207,000
	24	0	229,000
	25	100	227,000
	26	500	174,000
	27	400	203,000
	28	200	200,000
	29	500	204,000
	30	200	205,000
Total Sept. 1937		16,700	5,324,000

1937		KWH Received from P. S.	KWH Delivered to P. S.
Oct.	1	200	215,000
	2	200	185,000
	3	700	195,000
	4	300	166,000
	5	800	157,000
	6	1,600	181,000
	7	300	181,000
	8	700	196,000
	9	200	91,000
	10	1,700	101,000
	11	200	150,000
	12	200	166,000
	13	100	166,000
	14	700	180,000
	15	600	197,000
	16	400	171,000
	17	800	102,000
	18	300	181,000
	19	600	154,000
	20	0	153,000
	21	200	172,000
	22	600	156,000
	23	1,100	79,000
	24	1,300	55,000
	25	1,000	113,000
	26	2,100	124,000
	27	400	139,000
	28	500	136,000
	29	1,200	118,000
	30	0	72,000
	31	1,300	77,000
Total Oct. 1937		20,300	4,529,000

1937		KWH Received from P. S.	KWH Delivered to P. S.
Nov.	1	1,100	110,000
	2	800	109,000
	3	900	140,000
	4	1,700	108,000
	5	1,100	114,000
	6	800	90,000
	7	1,500	65,000
	8	800	155,000
	9	700	129,000
	10	500	139,000
	11	1,700	82,000
	12	900	116,000
	13	1,100	104,000
	14	1,000	75,000
	15	1,100	113,000
	16	700	105,000
	17	300	106,000
	18	1,100	85,000
	19	1,600	88,000
	20	1,300	87,000
	21	1,600	60,000
	22	2,100	78,000
	23	2,300	71,000
	24	1,300	83,000
	25	700	60,000
	26	900	80,000
	27	1,000	109,000
	28	2,200	67,000
	29	1,800	84,000
	30	2,200	80,000
Total Nov. 1937		36,800	2,892,000

1937		KWH Received from P. S.	KWH Delivered to P. S.
Dec.	1	1,300	86,000
	2	1,800	122,000
	3	700	102,000
	4	2,200	61,000
	5	700	174,000
	6	700	120,000
	7	1,200	137,000
	8	1,100	111,000
	9	800	105,000
	10	500	144,000
	11	1,900	96,000
	12	2,700	74,000
	13	900	175,000
	14	1,200	188,000
	15	1,100	191,000
	16	600	193,000
	17	300	175,000
	18	600	152,000
	19	1,800	65,000
	20	1,300	123,000
	21	500	137,000
	22	900	129,000
	23	1,200	133,000
	24	1,100	88,000
	25	1,800	64,000
	26	1,600	62,000
	27	1,900	93,000
	28	1,300	115,000
	29	1,200	82,000
	30	1,200	102,000
	31	1,300	109,000
Total Dec. 1937		37,400	3,708,000

1938		KWH Received from P. S.	KWH Delivered to P. S.
Jan.	1	1,700	84,000
	2	2,100	66,000
	3	4,300	103,000
	4	500	141,000
	5	700	127,000
	6	800	126,000
	7	800	97,000
	8	1,400	76,000
	9	900	67,000
	10	600	123,000
	11	800	123,000
	12	1,000	123,000
	13	800	102,000
	14	600	93,000
	15	1,100	90,000
	16	3,400	70,000
	17	1,200	126,000
	18	1,300	160,000
	19	300	224,000
	20	900	187,000
	21	300	167,000
	22	1,500	172,000
	23	1,000	81,000
	24	300	145,000
	25	700	122,000
	26	500	136,000
	27	700	144,000
	28	900	162,000
	29	500	102,000
	30	900	60,000
	31	1,200	139,000
Total Jan. 1938		30,700	3,718,000

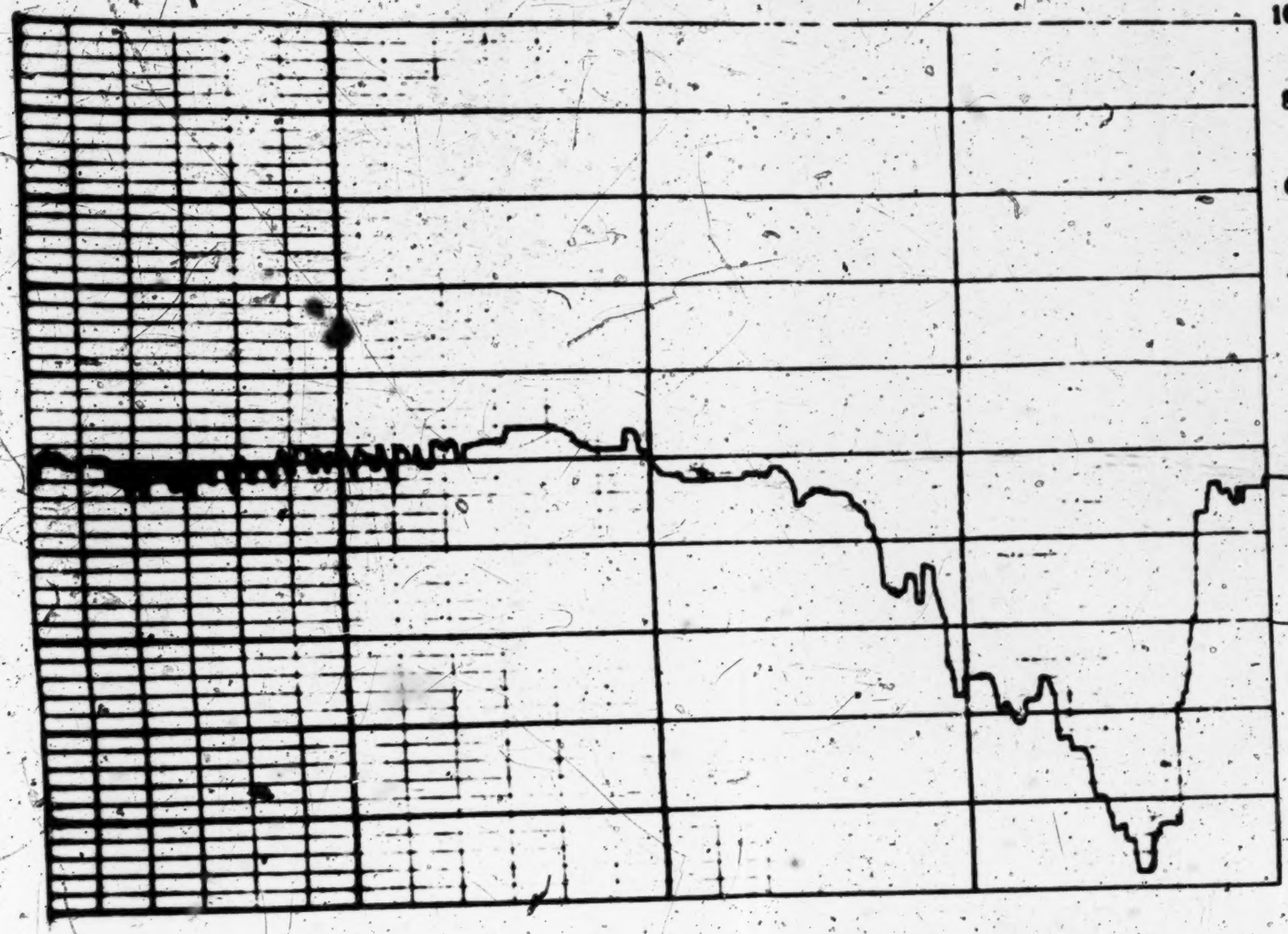
1938		KWH Received from P. S.	KWH Delivered to P. S.
Feb.	1	600	124,000
	2	800	113,000
	3	1,400	162,000
	4	900	111,000
	5	700	101,000
	6	700	75,000
	7	700	94,000
	8	700	124,000
	9	500	133,000
	10	2,000	96,000
	11	600	107,000
	12	1,300	80,000
	13	1,300	66,000
	14	800	80,000
	15	1,100	105,000
	16	600	125,000
	17	800	110,000
	18	300	124,000
	19	1,400	96,000
	20	1,200	58,000
	21	300	96,000
	22	1,200	89,000
	23	1,300	149,000
	24	1,000	129,000
	25	1,000	105,000
	26	0	138,000
	27	1,300	67,000
	28	1,300	104,000
Total Feb. 1938		25,800	2,961,000

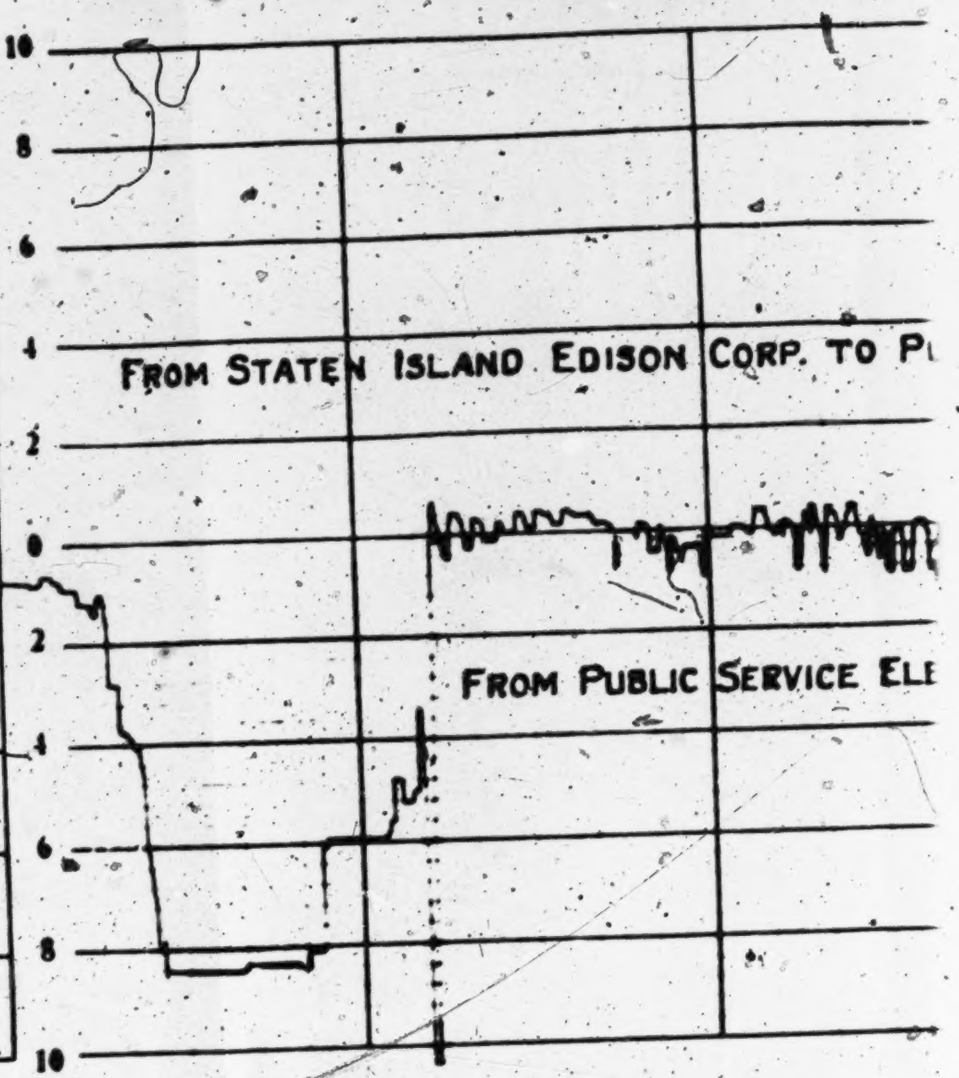
1938		KWH Received from P. S.	KWH Delivered to P. S.
March	1	300	154,000
	2	400	148,000
	3	400	136,000
	4	500	122,000
	5	1,400	96,000
	6	2,200	66,000
	7	700	136,000
	8	500	147,000
	9	600	125,000
	10	800	153,000
	11	700	113,000
	12	1,300	85,000
	13	1,500	58,000
	14	1,000	137,000
	15	800	168,000
	16	1,000	139,000
	17	400	154,000
	18	600	110,000
	19	800	84,000
	20	1,400	61,000
	21	800	124,000
	22	1,100	138,000
	23	200	149,000
	24	200	14,000
	25	1,100	87,000
	26	1,700	60,000
	27	2,900	48,000
	28	2,600	114,000
	29	1,000	89,000
	30	900	112,000
	31	1,100	134,000
Total March 1938		30,900	3,461,000

1938		KWH Received from P. S.	KWH Delivered to P. S.
April	1	2,200	82,000
	2	2,300	71,000
	3	5,100	34,000
	4	1,700	98,000
	5	2,500	118,000
	6	300	146,000
	7	2,000	137,000
	8	400	116,000
	9	2,600	68,000
	10	2,200	46,000
	11	500	65,000
	12	1,400	100,000
	13	1,100	100,000
	14	800	107,000
	15	2,500	65,000
	16	2,700	98,000
	17	2,600	51,000
	18	1,500	92,000
	19	1,700	98,000
	20	1,400	114,000
	21	1,300	94,000
	22	400	111,000
	23	1,900	85,000

[redacted] Circuit No. ..... Chart Style No. 524478 Date .....

Westinghouse Recording Instrument.





4 AM

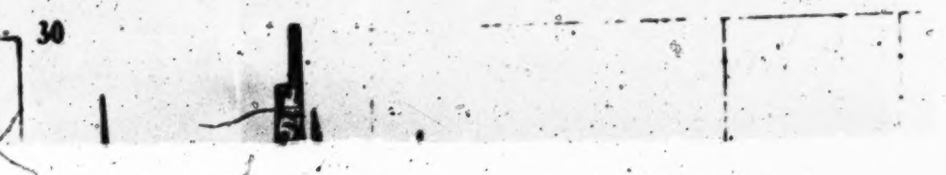
3 AM

2 AM

[redacted]

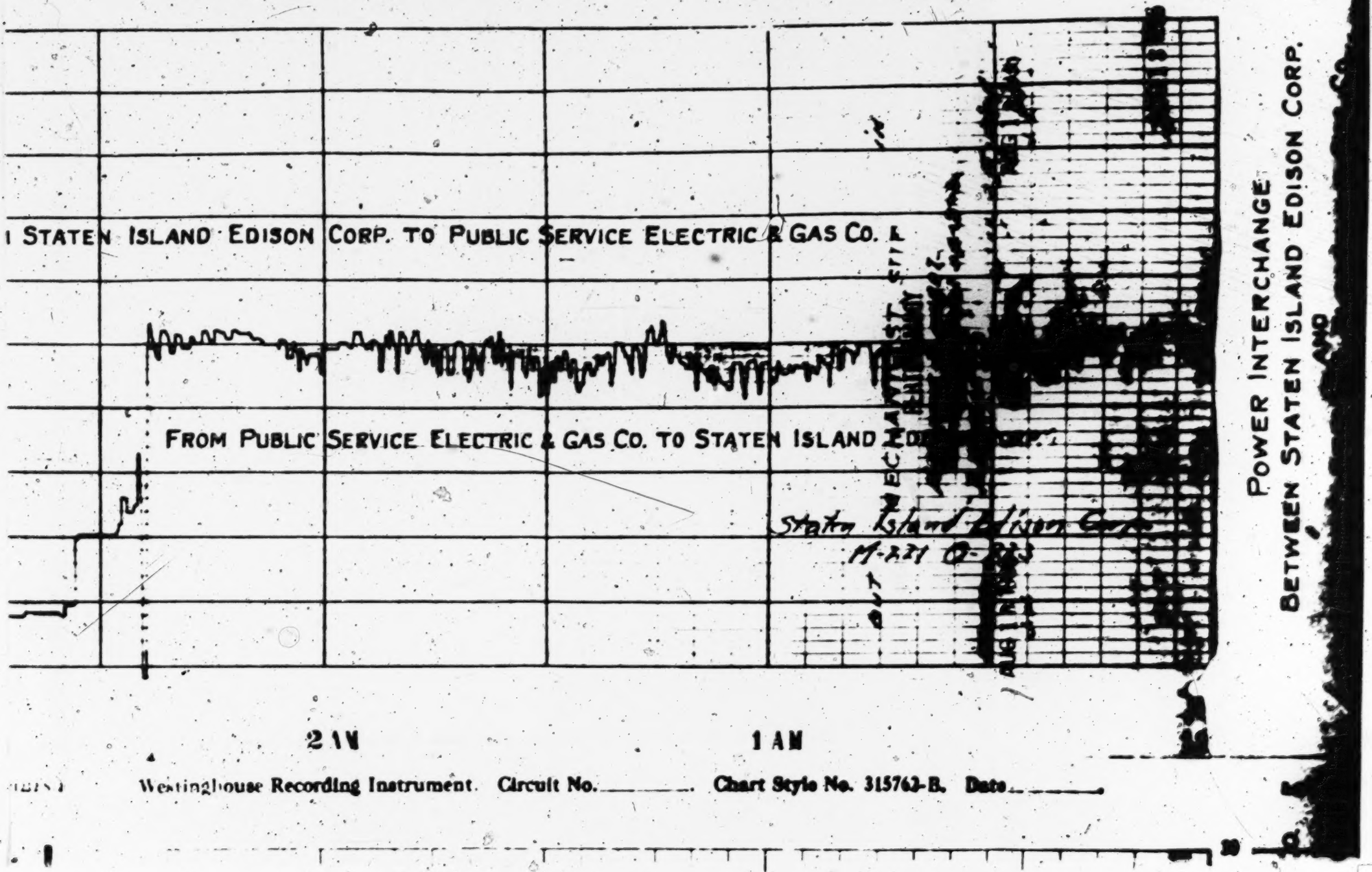
ording Instrument. Circuit No. _____. Chart Style No. 315762-B. Date _____

Westinghouse Recording Instrumer



COMMISSION'S EXHIBIT NO. 21

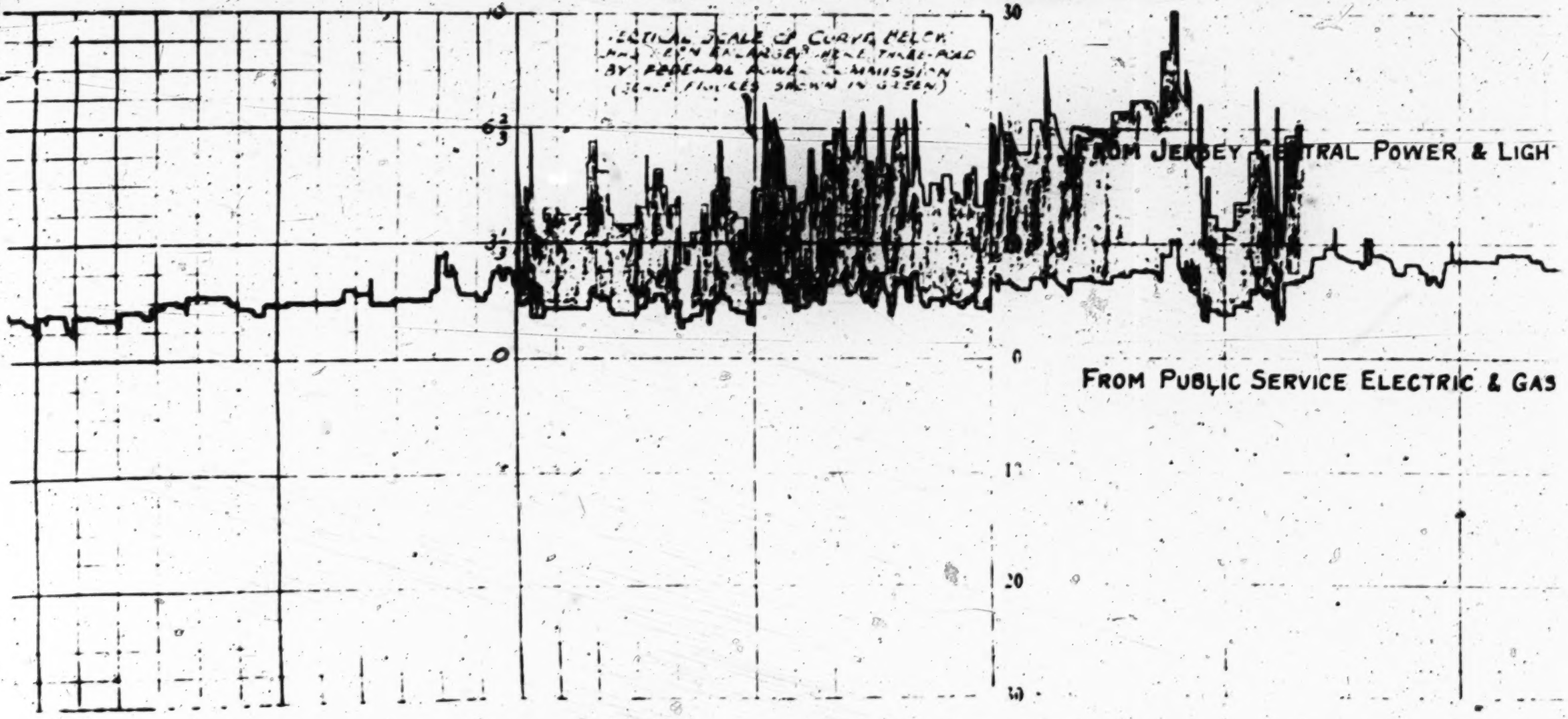
Westinghouse Recording Instrument. Circuit No. .... Chart Style No. 324478 Date.....



Westinghouse Recording Instrument. Circuit No._____. Chart Style No. 315762-B. Date_____

4 AM 3 AM 2 AM

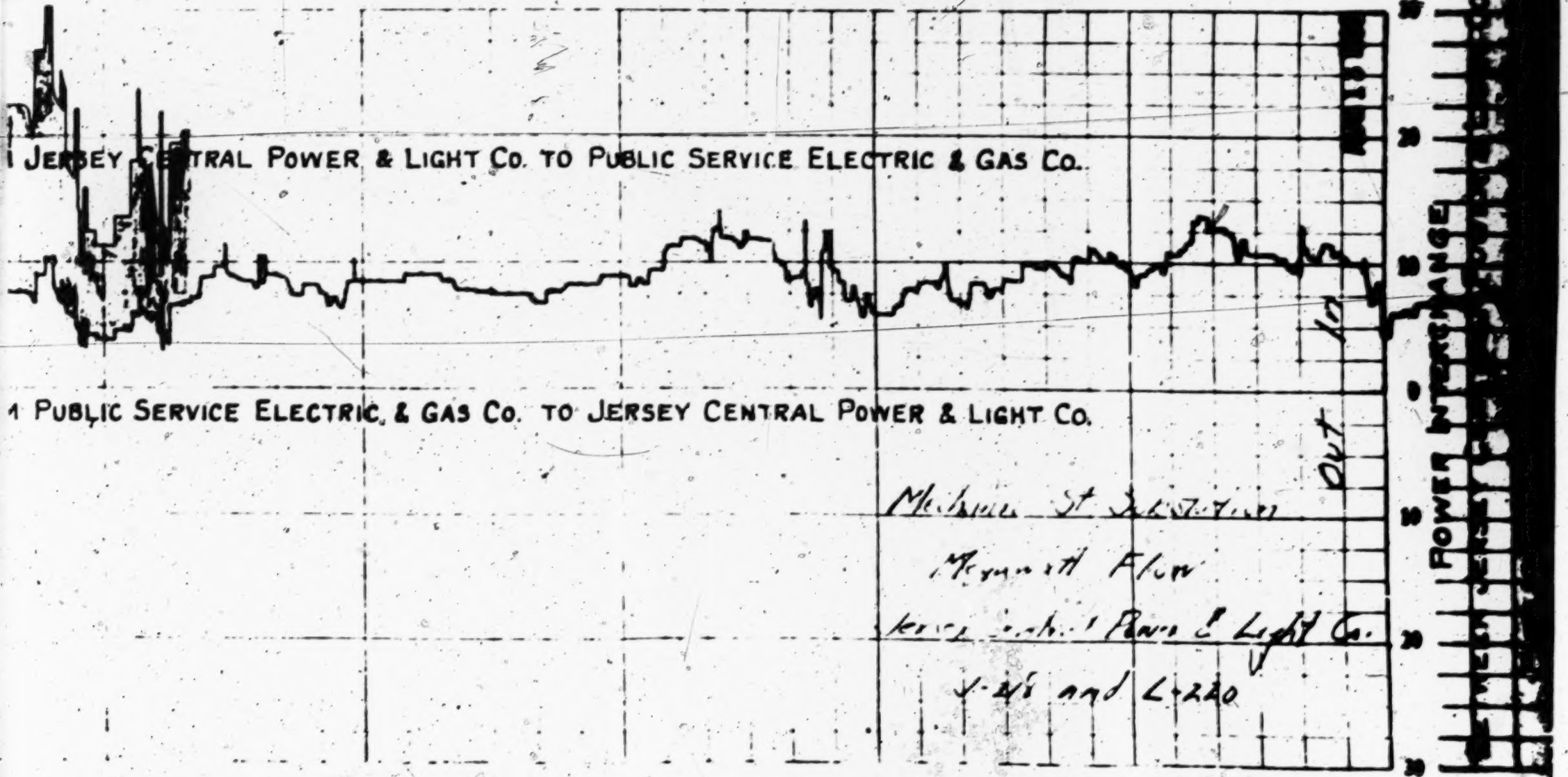
recording Instrument. Circuit No._____. Chart Style No. 315762-B. Date _____. Westinghouse Recording Instr



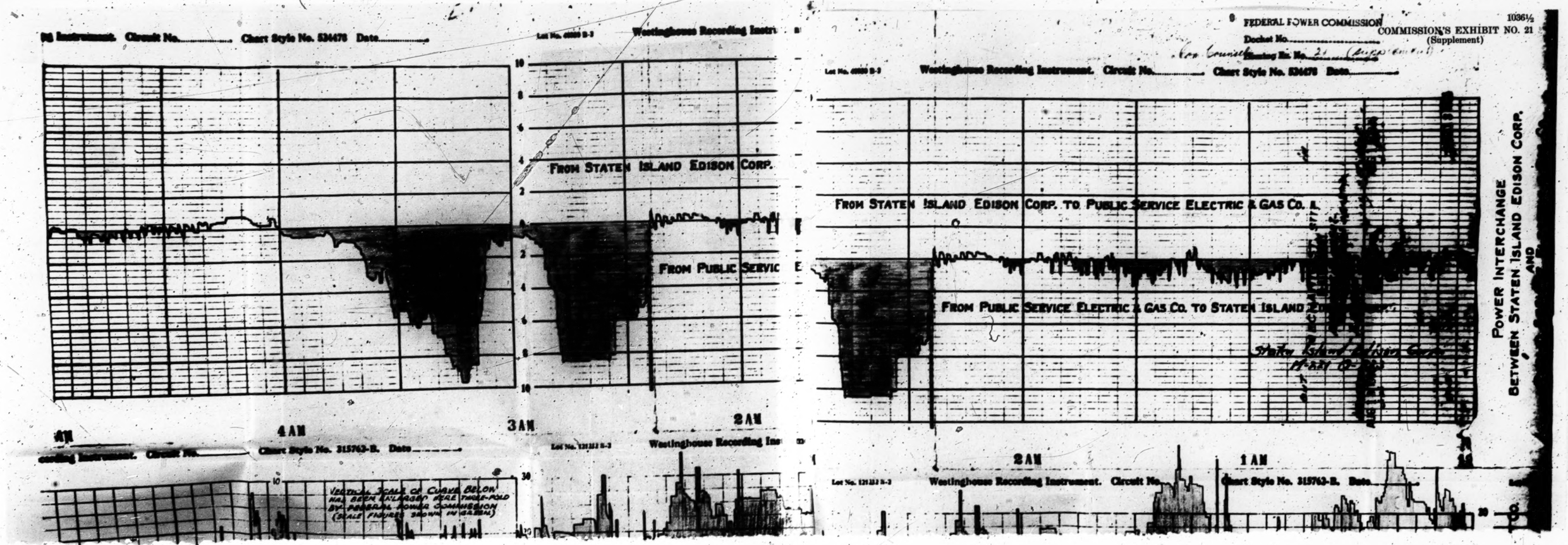
5 AM 4 AM 3 AM 2 AM

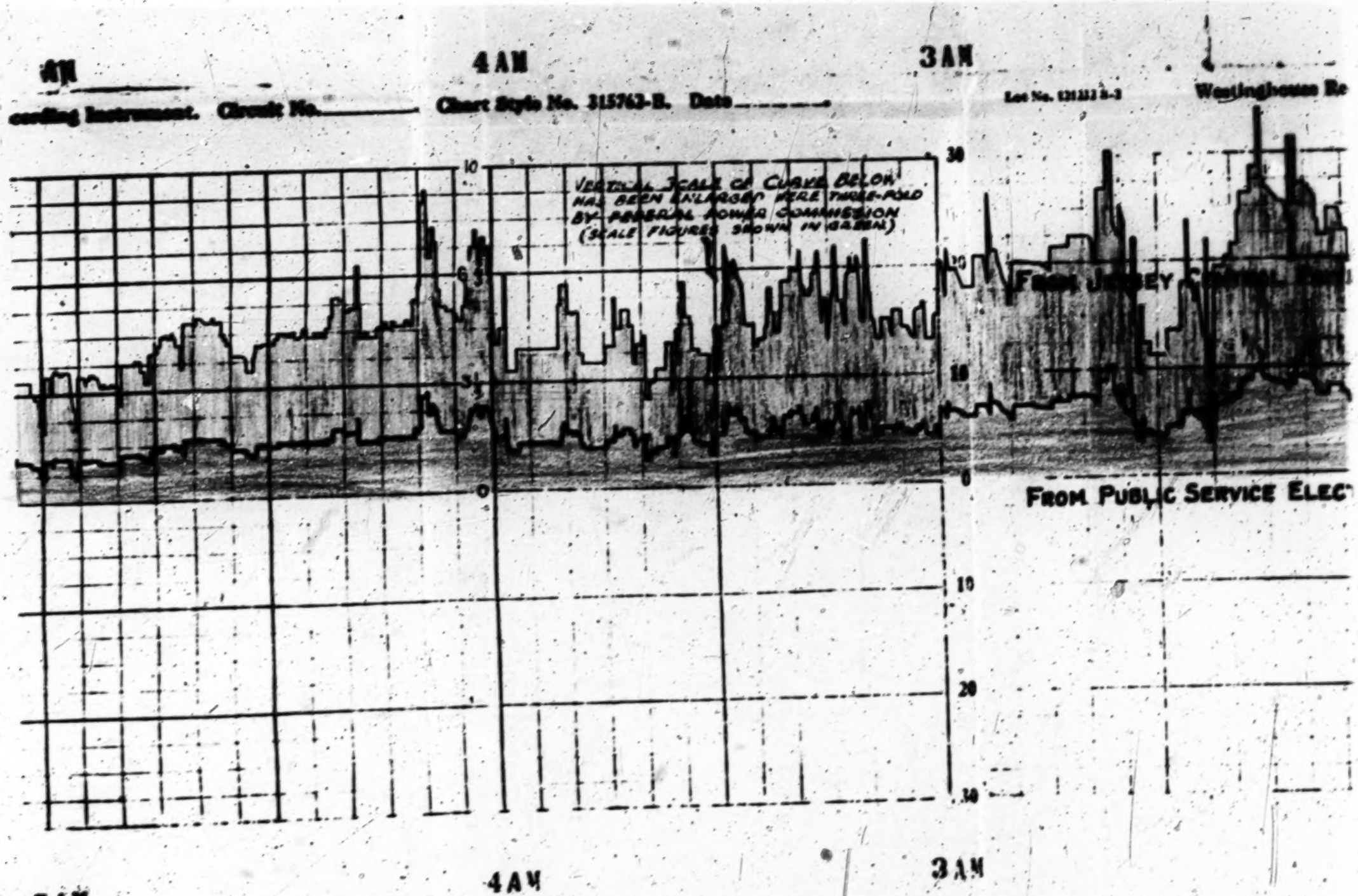
2 AM 1 AM

Westinghouse Recording Instrument. Circuit No. _____. Chart Style No. 315763-B. Date _____.



2 PM 1 PM 12-N


FEDERAL POWER COMMISSION
Docket No.
COMMISSION'S EXHIBIT NO. 21
(Supplement)
1036½
Non Coincident
Westinghouse Recording Instrument. Circuit No. Chart Style No. 534478 Date
From Staten Island Edison Corp. to Public Service Electric & Gas Co.
From Public Service Electric & Gas Co. to Staten Island
Staten Island Edison Corp.
Power Interchange
Between Staten Island Edison Corp.
And
Westinghouse Recording Instrument. Circuit No. Chart Style No. 315763-B. Date
Vertical Scale of Curve Below has been enlarged Scale three-fold by Federal Power Commission (Scale figures shown in red)
4 AM
3 AM
2 AM
1 AM


4 AM
recording instrument. Circuit No.
Chart Style No. 315762-B. Date
3 AM
Westinghouse Re
VERTICAL SCALE OF CURVE BELOW HAS BEEN ENLARGED HERE THREE-FOLD BY FEDERAL POWER COMMISSION (SCALE FIGURES SHOWN IN GREEN)
FROM PUBLIC SERVICE ELEC
5 AM
4 AM
3 AM

2 AM 1 AM

Westinghouse Recording Instrument. Circuit No. Chart Style No. 315762-B. Date

From Jersey Central [illegible] Public Service Electric & Gas Co.

FROM PUBLIC SERVICE ELECTRIC & GAS CO. TO JERSEY CENTRAL POWER & LIGHT CO.

Mechanic St. Substation Out

Monmouth Flow

Jersey Central Power & Light Co.

L-218 and L-220

POWER IN MEGAWATTS

2 PM

24 N 1 M 12-N

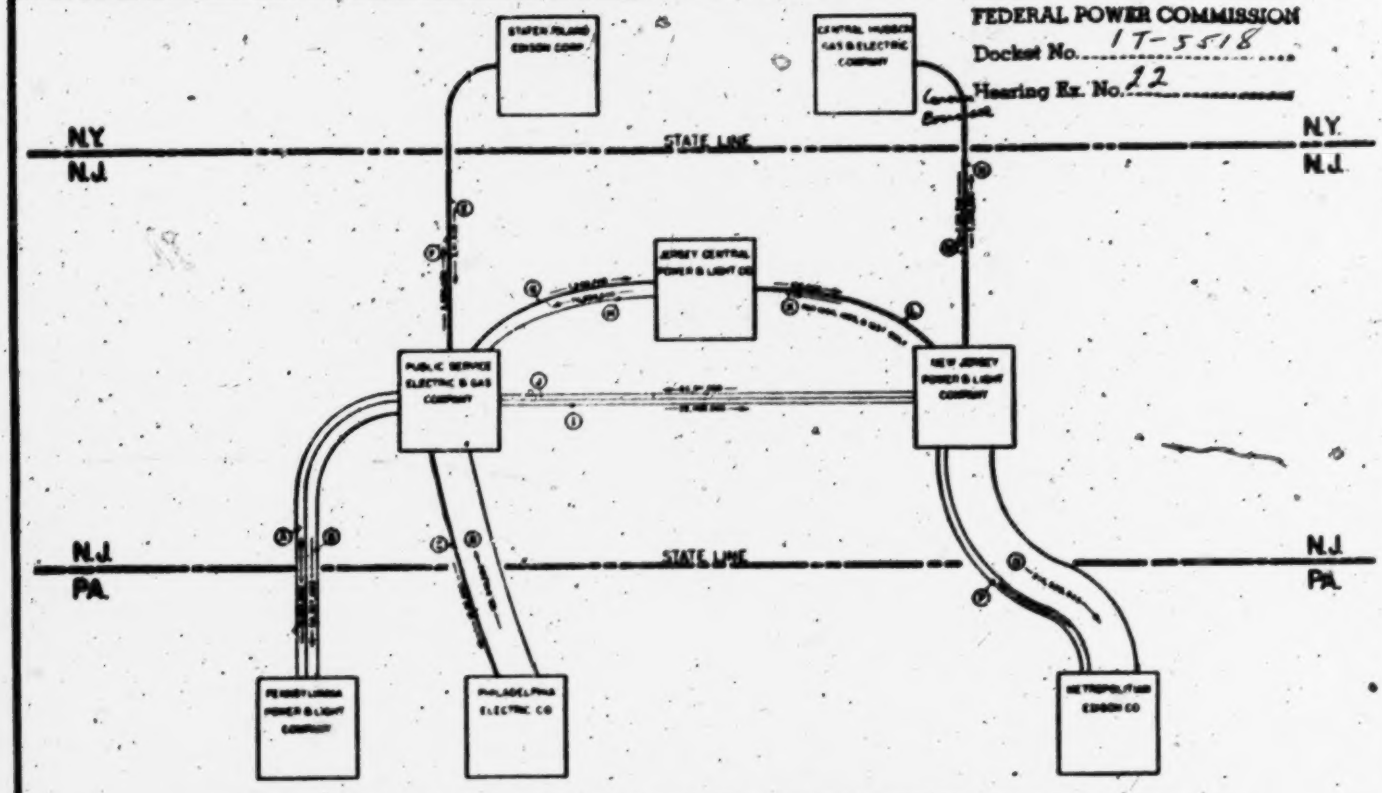
Docketed
Oct. 24 1958

Livingston
3-750
Madison
3-500
Pinewald
3-333
Forked River
Barnegat
LEGEND
Generating Station (Steam)
Substation
3-50 Number & Capacity of Transformers
1-33-ECu Transmission Line (11 K.V. & Over)
Size & Kind of Wire
Voltage in K.V.
Number of Circuits
Transmission Line (Below 11 K.V.)
Interconnection
Service Area
0
5
10
Scale in Miles
MAP SHOWING
Service Area
And Electric Transmission Facilities
of
JERSEY CENTRAL POWER & LIGHT CO.
Aug. 1938

FEDERAL POWER COMMISSION

ELECTRIC ENERGY TRANSACTIONS BETWEEN UTILITY SYSTEMS AFFECTING THE OPERATIONS OF THE JERSEY CENTRAL POWER AND LIGHT COMPANY—1934 TO 1937

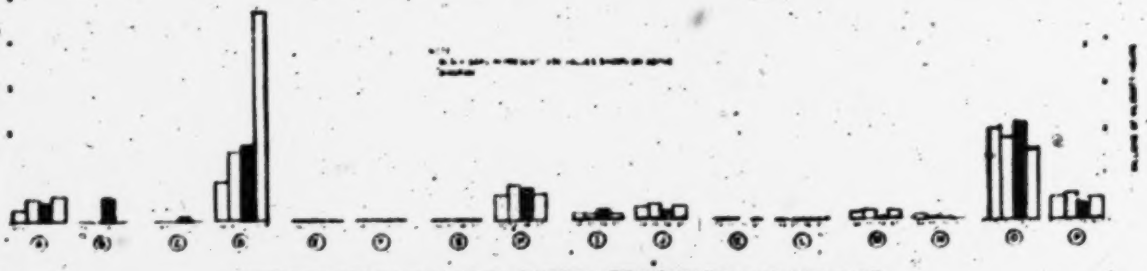
FEDERAL POWER COMMISSION
Docket No. IT-5518
Hearing Ex. No. 12



INTERCHANGE OF ELECTRIC ENERGY BETWEEN COMPANIES AFFECTING INTERSTATE TRANSFERS IN 1936

[1934 TO 1937 INTERCHANGES ARE COMPARED IN BAR CHART BELOW]

FIGURES INDICATE KILOWATT-HOURS, ARROWS SHOW DIRECTION OF FLOW, WIDTH OF BAND PROPORTIONAL TO KILOWATT-HOURS



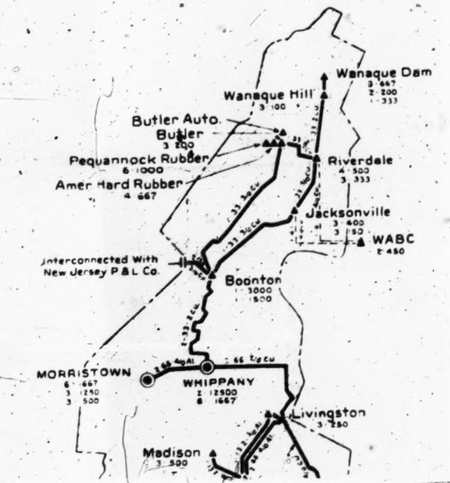
INTERCOMPANY ELECTRIC ENERGY TRANSFERS-1934 TO 1937

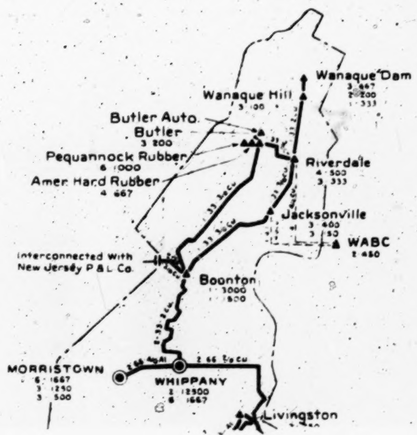
LETTERS (A) (B) (C) (D) ETC REFER TO DIRECTION OF ENERGY TRANSFER AND TO COMPANIES INVOLVED AS SHOWN ON ABOVE DIAGRAM

BUREAU OF ENGINEERING — DIVISION OF POWER RESOURCES AND REQUIREMENTS

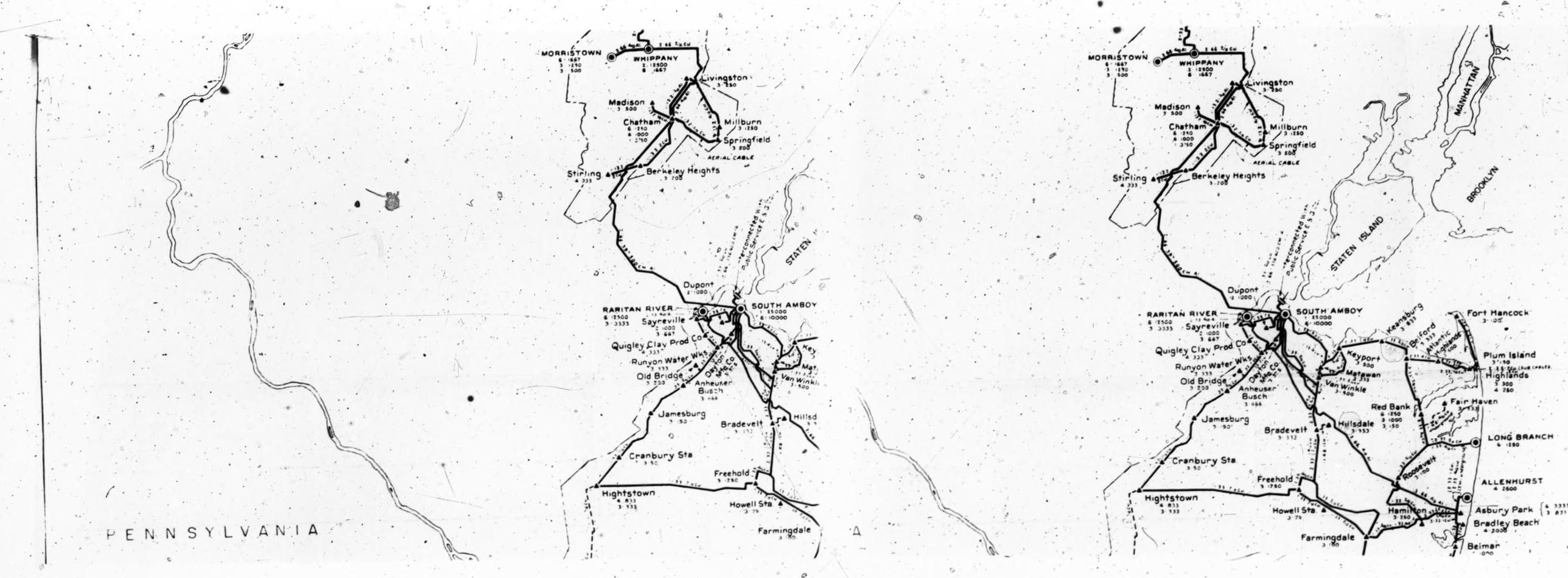
NEW YORK

NEW YORK





FEDERAL POWER COMMISSION
Docket No. II-5518
Hearing Ex. No. DNE
Inter


PENNSYLVANIA
MORRISTOWN
WHIPPANY
Livingston
Madison
Chatham
Millburn
Springfield
AERIAL CABLE
Stirling
Berkeley Heights
STATEN
Dupont
RARITAN RIVER
SOUTH AMBOY
Sayreville
Quigley Clay Prod Co
Runyon Water Wks
Old Bridge
Anheuser Busch
Jamesburg
Bradevelt
Cranbury Sta
Freehold
Hightstown
Howell Sta
Farmingdale
MANHATTAN
BROOKLYN
STATEN ISLAND
Keansburg
Keyport
Matawan
Van Winkle
Hilsdale
Red Bank
Fair Haven
Fort Hancock
Plum Island
Highlands
LONG BRANCH
ALLENHURST
Roosevelt
Hamilton
Asbury Park
Bradley Beach
Belmar

PENNSYLVANIA

NEW JERSEY

Hightstown
6 833
3 333

Howell Sta
3 75

Farmingda
3 80

Standard Silica Sand
3 200

LAKEWOOD
6 600

New Egypt
3 200

Camp Dix

Wrightstown
3 00

interconnected with
Public Service E & G Co

Navy
3 400

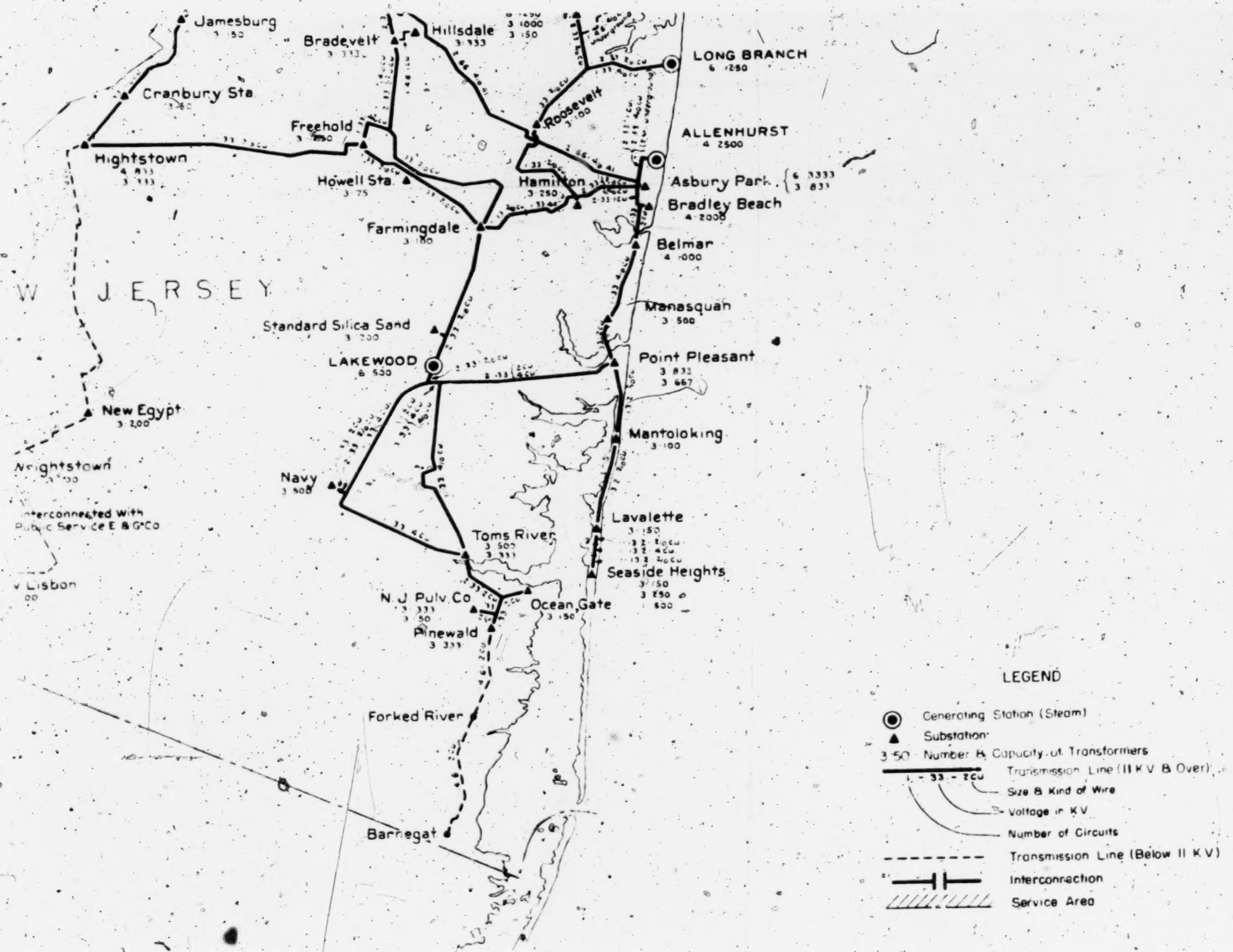
New Lisbon
4 00

N J Pulv
1 333
1 50

Piney
3 3

Forked Riv

Barnegat


Jamesburg
3-150
Bradevelt
3-333
Hillsdale
3-333
3-1000
3-150
LONG BRANCH
6-1250
Cranbury Sta
3-150
Roosevelt
3-100
Freehold
3-250
ALLENHURST
4-2500
Hightstown
4-833
3-333
Howell Sta
3-75
Hamilton
3-250
Asbury Park
6-3333
3-833
Bradley Beach
4-2000
Farmingdale
3-100
Belmar
4-1000
W J E R S E Y
Manasquan
3-500
Standard Silica Sand
3-200
LAKEWOOD
6-550
Point Pleasant
3-833
3-667
New Egypt
3-200
Mantoloking
3-100
Navy
3-500
Lavalette
3-150
Toms River
3-500
3-333
Seaside Heights
3-150
3-250
600
N.J. Pulv. Co
3-333
3-50
Ocean Gate
3-150
Pinewald
3-333
Forked River
Barnegat
LEGEND
Generating Station (Steam)
Substation
3-50 Number & Capacity of Transformers
Transmission Line (11 K.V. & Over)
1 - 33 - 2Cu
Size & Kind of Wire
Voltage in K.V.
Number of Circuits
Transmission Line (Below 11 K.V.)
Interconnection
Service Area

INTERVENOR'S EXHIBIT NO. 2

INTERCONNECTION AGREEMENT
BETWEEN
JERSEY CENTRAL POWER AND LIGHT COMPANY
AND
PUBLIC SERVICE ELECTRIC AND GAS COMPANY

THIS AGREEMENT made this 24th day of March, 1931, by and between JERSEY CENTRAL POWER AND LIGHT COMPANY, a corporation organized under the laws of the State of New Jersey, hereinafter referred to as JCP&L, and PUBLIC SERVICE ELECTRIC AND GAS COMPANY, a corporation organized under the laws of the State of New Jersey, hereinafter referred to as PS,

WITNESSETH:

WHEREAS, JCP&L and PS separately own and operate electric supply systems in the State of New Jersey; and

WHEREAS, under an agreement between the parties hereto dated September 11, 1925, PS has been supplying to JCP&L and JCP&L has been receiving from PS, electric energy over and by means of certain transmission facilities connecting the system of PS at Perth Amboy with that of JCP&L at South Amboy; and

WHEREAS, the said agreement and the supply of electric energy thereunder terminated and ceased on January 31, 1931; and

WHEREAS, improvements in service rendered by both parties hereto to their respective customers and other benefits will be made possible by continued operation and use of transmission facilities connecting their systems; and

WHEREAS, the parties hereto accordingly desire to

continue to operate and use transmission facilities connecting their systems and to define and set forth their respective rights, duties, and obligations in connection with the construction, operation, and use of such facilities;

NOW, THEREFORE, in consideration of the premises and of the mutual covenants and conditions hereinafter set forth the parties hereto do hereby agree as follows:—

ARTICLE I
Facilities to be Made Available

SECTION 1. The following interconnecting facilities shall be installed, paid for, owned, and/or made available by JCP&L beginning June 1, 1931 or as soon thereafter as practicable:

Item 1—Two 26,400-volt; three-phase transmission circuits extending from the South Amboy Generating Station of JCP&L to the terminus on the south bank of the Raritan River of the existing submarine cables under that river used by PS to transmit the electric energy supplied to JCP&L under the aforementioned agreement between them dated September 11, 1925, which circuits shall consist of 2/0 A. W. G. or larger copper conductors supported on wood poles except that at the point of crossing the railroad and public highway adjacent to the site of South Amboy Generating Station they may be supported on steel towers or, if necessary, placed in underground conduits.

Item 2—At the South Amboy Generating Station, one 25,000-kv-a., three-phase, nominally 13,200-volt to 26,400-volt transformer which may, if desired by JCP&L, be designed for 13,200-volt to 33,000-volt operation, facilities for changing the voltage ratio under load, disconnecting switches necessary to connect the two circuits specified in Item 1 of this Section to this transformer, and appurtenant facilities.

Item 3—One 13,200-volt oil circuit breaker with a rating suitable to the purposes of this interconnection with appurtenant disconnecting switches, buses, structures, and other equipment necessary to connect the transformer specified in Item 2 of this Section to the 13,200 volt buses at the South Amboy Generating Station.

Item 4—Such 13,200-volt metering equipment at the South Amboy Generating Station as may be necessary and practicable to measure and account for the service to be furnished hereunder and for load dispatching purposes.

SECTION 2. The following interconnecting facilities shall be installed, paid for, owned, and/or made available by PS beginning June 1, 1931 or as soon thereafter as practicable:

Item 1—The two existing 26,400-volt, three-phase, 350,000-circular-mil submarine cables under the Raritan River used by PS to transmit the electric energy supplied to JCP&L under the aforementioned agreement between them dated September 11, 1925.

Item 2—Two 26,400-volt, three-phase transmission circuits extending from the terminus of the aforesaid submarine cables on the north bank of the Raritan River to the Mechanic Street Substation of PS, which circuits shall consist of 350,000-circular-mil aerial cable supported on wood poles and/or 350,000-circular-mil underground cable installed in conduits.

Item 3—One 26,400-volt oil circuit breaker with a rating suitable to the purposes of this interconnection, with appurtenant disconnecting switches, buses, structural steel supports, and other equipment necessary to connect the two circuits specified in Item 2 of this Section to the 26,400-volt buses at the Mechanic Street Substation through this oil circuit breaker.

Item 4—Such 26,400-volt metering equipment at the Mechanic Street Substation as may be necessary and practicable to measure and account for the service to be furnished hereunder and for load dispatching purposes.

SECTION 3. Such of the facilities to be made available under the provisions of the foregoing sections of this Article as are not now in existence shall be designed and constructed in accordance with good practice.

SECTION 4. JCP&L shall have the right to use the wood poles and steel towers specified in Item 1 of Section 1 of this Article and PS shall have the right to use the wood poles and underground conduits specified in Item 2 of Section 2 of this Article for the attachment of other electric transmission and distribution facilities for their respective own purposes. Any such facilities so attached shall be constructed, operated, and maintained in accordance with good practice and in such manner as will not adversely affect the usefulness of the interconnecting circuits for the purposes intended.

Use of any part or all of the interconnecting facilities made available hereunder for any purpose other than provided for herein shall be only by agreement of the parties hereto.

ARTICLE II

Service to be Rendered

In the event of breakdown of equipment, unusual load demands, or other unusual or abnormal condition in the system of either party resulting in need by that party for power in excess of the capacity available from its normal power sources, that party may call on the other party to supply Emergency Power to the extent of, and for the

duration of, the need for such excess power, but not in excess of the carrying capacity of the interconnecting facilities, and the other party shall supply such Emergency Power to the extent that it has capacity available from its normal power sources and is able to supply such Emergency Power without unduly impairing or jeopardizing service in its own system; provided, that for the purpose of determining the entitlement of Emergency Power hereunder said need for excess power shall be diminished by the amount by which the aggregate capacity normally available from the normal power sources of the party calling for such Emergency Power is less than the reasonably expected peak load of its system plus two-thirds of the capacity of either the largest generating unit in the system of JCP&L or the largest generating unit in the system of PS, whichever unit is smaller.

Under the terms of this Article each party's system shall not be considered to include such divisions of its system as are not effectively interconnected with the division in which the interconnecting facilities made available hereunder terminate.

ARTICLE III

Operation

SECTION 1. The energy to be supplied by each party to the other shall be nominally balanced three-phase nominally sixty-cycle alternating current at a voltage of nominally 26,400 volts.

SECTION 2. Each party shall adjust, maintain, and operate the portion of the said interconnecting facilities made available by it in accordance with good modern practice and so as to render, to the greatest extent practicable and reasonable, the services intended hereunder and shall from time to time make such replacements and renewals

as may be required to insure such facilities' being in good operating condition. Each party shall adjust, maintain, and operate the remainder of its system in accordance with good modern practice and in such manner as will, to the greatest extent practicable and reasonable, protect the apparatus and circuits of the other from damage and interruption by lightning, short circuits, potential surges, or otherwise, and prevent any disturbances originating in its system from affecting service in the system of the other party.

ARTICLE IV

Point of Delivery

All electric energy to be supplied hereunder by either party to the other shall be delivered at the point on the south bank of the Raritan River at which the interconnecting facilities made available hereunder by each party are attached to the interconnecting facilities made available hereunder by the other.

ARTICLE V

Metering

SECTION 1. All energy supplied hereunder by PS to JCP&L shall be measured by the metering equipment at Mechanic Street Substation specified in Item 4 of Section 2 of Article I hereof.

All energy supplied hereunder by JCP&L to PS shall be measured by the metering equipment at South Amboy Generating Station specified in Item 4 of Section 1 of Article I hereof.

SECTION 2. The losses associated with the transformation and transmission of Emergency Power over and by means of the interconnecting facilities made available

8. Customer shall indemnify and save harmless Public Service from all cost, expense or liability for damages which may arise resulting from the use of electrical energy on customer's premises or from the presence upon such premises of any of the appliances of Public Service, unless the damages shall be the result of the sole negligence of Public Service or its employees.

9. Customer shall obtain or cause to be obtained all permits necessary to give Public Service or its agents access to the equipment and to enable its conductors to be connected therewith, together with all permits and certificates, municipal or otherwise, required by law or the rules of Public Service, and Public Service shall not be obliged to furnish such service unless and until such permits and certificates shall have been produced to Public Service.

10. Where the electrical energy entering customer's premises is of a type commercially known as 13,000 volts, 60 cycle, 3 phase, or of a type in excess of that voltage, it shall be understood that the electric service is then of a character that the switching operations thereof, unless controlled from the Public Service Station, would have a disturbing effect upon the general service of Public Service; therefore customer shall agree that the cutting in or cutting out of the switching apparatus on the 13,000 volt or 26,000 volt side of the service shall be directed in all such operations by the Public Service load dispatcher for the district.

11. The service and supply of electrical energy by Public Service for the use of owners, tenants or occupants of apartment buildings, or other tenant buildings, will be furnished directly to them as customers of Public Service through Public Service individual meters, and will not be supplied through a master meter for submetering or resale by or to any owner, tenant or occupant of any such building.

hereunder shall be borne by the party receiving such Emergency Power.

SECTION 3. Procedure in respect to maintenance, testing, calibrating, correction and registration records and precision tolerances of metering equipment used to account for the service furnished hereunder shall be in accordance with good practice or as may be agreed on between the parties hereto from time to time.

ARTICLE VI

Rates and Payments

SECTION 1. The party receiving Emergency Power hereunder shall pay therefor to the other party in accordance with the following charges:

(a) Daily Capacity Charge

For each calendar day a capacity charge of ten cents ($0.10) per kilowatt of greatest average demand in any even clock quarter-hour period of the day, which unit of measurement is designated herein as a kilowatt-day, which charge is to be paid monthly.

For the purpose of determining the charges hereunder the average demand in any even clock quarter-hour period shall be taken and considered to be the average draft of power in that period, measured in kilowatts, plus or minus one-seventh (1/7) of the number by which the average draft of lagging reactive power in that period, measured in kilovolt-amperes, respectively exceeds or is less than forty-eight per cent. (48%) of the said average draft of power. For the purpose of this determination leading reactive power shall be considered negative lagging reactive power.

(b) Annual Capacity Charge

At the end of each twelve-month period beginning

12. The rate for electrical service is subject to such changes as the State may require, authorize or allow from time to time; and whenever a change is made, authorized or allowed, whether less or more, the changed rate shall be deemed, taken and considered the rate applicable to the type of service furnished.

13. At the expiration of the stated term, this contract shall continue in force until terminated by thirty (30) days' written notice from either party.

This agreement shall cancel the agreement dated November 24, 1925, between Public Service Electric and Gas Company and Eastern New Jersey Power Company, which latter company was subsequently acquired by the Jersey Central Power and Light Company (party of the second part in this agreement).

IN WITNESS WHEREOF the party of the first part has caused its corporate seal to be hereunto affixed and duly attested, and the party of the second part has caused its corporate seal to be hereunto affixed and duly attested, the day and year first hereinabove written.

PUBLIC SERVICE ELECTRIC AND GAS COMPANY,
By GEORGE BARBER,
Vice-President.

LGP
LH
JM
LI

Attest:
CHARLES M. BREDER,
Secretary.

JERSEY CENTRAL POWER AND LIGHT COMPANY,
By T. R. CRUMLEY,
President.

M
MP

November 1st of each year, designated herein as the service year, the excess of kilowatt-days used by one party over the kilowatt-days used by the other party in that twelve-month period shall be subject to an additional capacity charge as follows:

1¢	per kilowatt-day	for the first	12,000 kilowatt-days.
2¢	" "	" " second	" "
3¢	" "	" " third	" "
4¢	" "	" " fourth	" "
5¢	" "	" " fifth	" "
6¢	" "	" " sixth	" "
7¢	" "	" " seventh	" "
8¢	" "	" " eighth	" "
9¢	" "	" " ninth	" "
10¢	" "	" " tenth	" "
11¢	" "	" " eleventh	" "
12¢	" "	" " twelfth	" "
13¢	" "	" " thirteenth	" "
14¢	" "	" " fourteenth	" "
15¢	" "	" " fifteenth	" "
16¢	" "	" " sixteenth	" "
17¢	" "	" " seventeenth	" "
18¢	" "	" " eighteenth	" "
19¢	" "	" " nineteenth	" "
20¢	" "	" " twentieth	" "

20¢ per kilowatt-day for all additional excess.

(c) Energy Charge

An energy charge for all energy associated with Emergency Power flow, at the rate of six mills ($0.006) per kilowatt-hour, which charge is to be paid monthly.

In the event either party hereto becomes dissatisfied with the charges specified in this Section, said charge shall be subject to reconsideration and revision on written notice by the dissatisfied party to the other, and if the parties hereto are unable to agree on a mutually satisfactory revision the matter shall be subject to arbitration in the manner provided for herein; provided, that no revision of said

charges shall become effective until two and one-half (2½) years after the date of the aforesaid notice.

SECTION 2. All payments for charges incurred under the provisions of this agreement during any calendar month or service year shall be due and payable on the last day of the following calendar month, provided the bill therefor be rendered on or before the tenth day of the said following calendar month, or in the event said bill be rendered later, on the twentieth day following the rendering of the bill.

In case either party disputes the correctness of any portion of a bill, it shall nevertheless make payment of the full undisputed amount. When decision or agreement in respect to the disputed amount is reached, interest thereon at the rate of six per cent. (6%) per annum shall apply from the date on which it was originally due.

ARTICLE VII

Indemnity

Each party will save the other party hereto harmless of and from any and all loss and damage by reason of any bodily injury, death, or damage to property caused or sustained on that portion of the interconnecting facilities owned, controlled, or made available by it, notwithstanding that a judgment may be rendered against the other party hereto; except that each party shall be responsible for all injuries or damages to its own employees, agents, and servants for which compensation is payable under the provisions of any Workmen's Compensation Law.

ARTICLE VIII

Arbitration

In the event a disagreement arises between the parties hereto in regard to their respective rights, duties, and obli-

gations hereunder, or in regard to any matter specified herein as being subject to arbitration, and if the parties hereto are unable to settle such disagreement between themselves, the matter in dispute shall be referred to a Board of Arbitration consisting of three (3) competent disinterested persons skilled in the particular matter which is the subject of dispute.

One (1) of the said arbitrators shall be appointed by each of the parties hereto and the third arbitrator shall be appointed by the two arbitrators thus appointed. The party desiring an arbitration shall give written notice to the other party, setting forth the matter in dispute and naming its arbitrator. If the party upon whom such notice is served neglects or refuses for twenty (20) days thereafter to name by notice to the other party a person to act as its arbitrator or if the two arbitrators named shall fail within twenty (20) days from their appointment to agree upon or appoint the third, then upon written application by either party such second or third arbitrator, as the case may be, may be appointed by the person who at the time is Chairman of the Board of Public Utility Commissioners of the State of New Jersey. The Board of Arbitration so appointed shall hear the evidence submitted by the parties and its award, when reached, shall be in writing and signed by at least a majority thereof. The award of the Board of Arbitration shall in every case be final and conclusive as to the matter in dispute and shall be binding upon the parties, subject, however, to modification, correction, or vacation, or to appeal from a judgment entered thereon as provided by law. In event that the Board of Arbitration shall fail to make a decision within one hundred (100) days after the appointment of the third arbitrator, a new Board of Arbitration shall be chosen in like manner as if none had been previously selected.

Submission to arbitration in the manner herein pro-

vided shall be a condition precedent to the bringing of any action or suit by either party hereto against the other on account of any matter within the terms of this agreement.

Each party hereto shall pay the cost of its own arbitrator and both parties shall assume and pay, share and share alike, the cost of the third arbitrator and any other expenses incurred, provided the award of the arbitrators does not provide a different division of expense.

ARTICLE IX

PS-Monmouth Lighting Company Agreement

Nothing herein contained is intended to cancel or modify the agreement dated December 1, 1924 between PS and Monmouth Lighting Company, a predecessor company of JCP&L, covering the construction of a second and auxiliary line, which agreement shall remain in full force and effect.

ARTICLE X

Waiver of Rights

Any waiver at any time of the rights of either party hereto as to any default of the other party or any other matter arising hereunder shall not be deemed a waiver as to any subsequent default or other matter subsequently occurring.

ARTICLE XI

Effective Date and Termination

This agreement shall become effective on the date first above written and it shall continue in full force and effect until terminated. Either party shall have the right at its option to terminate this agreement by giving to the other

not less than two and one-half (2½) years' notice in writing of its intention so to do and this agreement shall terminate upon the date specified in said notice; provided, that no such notice shall operate to terminate this agreement prior to June 1, 1941.

ARTICLE XII

Assignment

The terms and provisions of this agreement shall inure to and bind not only the parties hereto, but also their respective successors and assigns; provided, that no assignment thereof shall be made by either party hereto without the written consent of the other unless such assignment shall be made to another company acquiring all or substantially all of the electric generation and transmission facilities of the assignor.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be signed in their respective names, each by duly authorized officers, and have further caused their respective corporate seals to be hereunto affixed and attested as of the day and year first above written.

Y.C.Y.
W.H.L.

JERSEY CENTRAL POWER AND LIGHT COMPANY
By T. R. CRUMLEY,
President.

Attest:
RUSSELL W. AUL,
Asst. Secretary

S.B. J.N.BB.
M.P. E.A.
N.W. N.J.W.

PUBLIC SERVICE ELECTRIC AND GAS COMPANY
By EDGAR ALLEGANT,
Vice-President.

Attest:
CHARLES M. BREDER,
Secretary

From document in Legal Record Dept. EEP.
Remarks .....

INTERVENOR'S EXHIBIT NO. 3

THIS AGREEMENT, made this nineteenth day of July, Nineteen hundred and thirty-five, between PUBLIC SERVICE ELECTRIC AND GAS COMPANY, a corporation of the State of New Jersey, hereinafter called "Public Service," party of the first part, and JERSEY CENTRAL POWER AND LIGHT COMPANY, a corporation of the State of New Jersey, hereinafter called "Customer," party of the second part:

WITNESSETH: That for and in consideration of the mutual covenants herein contained the said parties hereto do hereby mutually agree as follows:

Public Service will furnish to Customer at a terminal point located on the transmission line of Public Service between Comical Corners and a point on the Pemberton-Wrightstown Road where said transmission line enters the Government's property known as Camp Dix, Wrightstown, New Jersey, five hundred thirty-three (533) horse power (four hundred (400) kilowatts) maximum demand of electrical energy of the type commercially known as 13,000 volts, 60 cycle, 3 phase, alternating current, for the operation of motors and other electrical apparatus for a period

of one (1) year from the first day of June, Nineteen hundred and thirty-five, at the following rate or rates:

A demand charge shall be paid by Customer each month during the term hereof, to be determined as follows:

$100.00 for the first 50 kilowatts or less of monthly maximum demand;

$1.60 per kilowatt for the next 150 kilowatts of monthly maximum demand;

$1.40 per kilowatt for the next 300 kilowatts of monthly maximum demand;

$1.30 per kilowatt for the next 500 kilowatts of monthly maximum demand;

$1.20 per kilowatt for the next 1000 kilowatts of monthly maximum demand;

$1.10 per kilowatt in excess of 2000 kilowatts of monthly maximum demand.

In addition to the foregoing demand charge, Customer shall pay to Public Service each month an energy charge for the electrical energy furnished, as measured by the meter or meters supplied by Public Service, as follows:

3¢ per kilowatt hour for the first 5,000 kilowatt hours used in each month;

1¢ per kilowatt hour for the next 95,000 kilowatt hours used in each month;

.9¢ per kilowatt hour for the next 150,000 kilowatt hours used in each month;

.8¢ per kilowatt hour for the next 250,000 kilowatt hours used in each month;

.6¢ per kilowatt hour for the next 250,000 kilowatt hours used in each month;

.5¢ per kilowatt hour in excess of 750,000 kilowatt hours used in each month.

Night Service

When Customer has a consumption during the night periods in any month, of not less than 30% of the total consumption for such month, the consumption in such month during the night periods, as determined by the registration of a separate meter supplied by Public Service, shall be billed at six-tenths of one cent per kilowatt hour, subject to the discount allowed for Primary Service. When Customer's Monthly Maximum "Day Period" Demand in such month is less than Customer's Monthly Maximum Demand, both determined in accordance with the provisions herein set forth, a deduction shall be made in the Demand Charge equivalent to the amount of such difference in kilowatts of demand at one-half (½) the rate for the Demand Charge. The "day period" and the "night period" shall be stipulated by Public Service from time to time, but until further notice are hereby defined as being the period from 8:00 A. M. to 8:00 P. M. and the period from 8:00 P. M. to 8:00 A. M. respectively.

The above rate will be applied to each installation or plant. The electrical energy used by the same customer in different locations will not be combined.

Determination of Maximum Demands

The Customer's Daily Maximum 24-Hour Demand shall be the greatest average number of kilowatts supplied by Public Service during any fifteen minute interval in each calendar day.

The Customer's Monthly Maximum Demand shall be the greatest average of the Daily Maximum 24-Hour Demands selected from four different days in the current month; or, seventy-five per cent (75%) of the highest Daily Maximum 24-Hour Demand, whichever is the higher.

The Customer's Daily Maximum "Day Period" Demand shall be the greatest average number of kilowatts

supplied by Public Service during any fifteen minute interval in each day period.

The Customer's Monthly Maximum "Day Period" Demand shall be the greatest average of the Daily Maximum "Day Period" Demands selected from four different days in the current month; or, seventy-five per cent (75%) of the highest Daily Maximum "Day Period" Demand, whichever is the higher.

The Daily Maximum Demands shall be determined by the registration of recording demand instruments furnished by Public Service and subject to the provisions contained in the Power Factor Clause. Where the use of electrical energy is intermittent or subject to violent fluctuation, Public Service reserves the right to base the Customer's Maximum Demands upon five minute instead of fifteen minute intervals.

Power Factor

All electrical apparatus used by the Customer shall be subject to the approval of Public Service, and shall be of good commercial efficiency and of such character as to introduce no disturbing elements into the electrical system of Public Service. The average power factor under operating conditions of customer's load at the point where the electricity is metered shall not be less than 80%. Public Service reserves the right to inspect Customer's installed load and also the right to place at its own expense reactive component meters or other instruments on the premises of Customer for purposes of measuring the kilovolt-ampere demand, power factor or for other tests.

Primary Service Discount

Where a Customer furnishes, installs and maintains all transforming devices, including step-down transformers, the meter or meter supplied by Public Service for measuring the electrical energy will be placed on the

high tension side of the transforming devices or step-down transformers. Public Service will, in consideration thereof, allow the Customer a discount of 5% for service metered at 2,200 or 4,150 volts, and a discount of 10% for service metered at 13,000 or 26,000 volts, from the total amount of each monthly bill. Such discount, however, shall not apply to reduce the minimum charge.

Minimum Charge

The monthly minimum charge shall be an amount equal to one-half (½) the highest monthly demand charge in any month during the immediately preceding eleven months, but shall in no case be less than $100.00.

It is understood and agreed that the form of service herein contracted for is intended to supply electrical energy to another electrical utility of the State of New Jersey to be by it distributed over its own lines to consumers. In consideration thereof, Public Service will allow the Customer a discount of 7½% from the total amount of each monthly bill, calculated at the rate or rates set forth in this contract.

It is understood that Public Service in the future may change its distribution lines supplying Customer from 13,000 volts, 60 cycle, 3 phase, alternating current, to 26,000 volts, 60 cycle, 3 phase, alternating current, and it shall have the right at any time to make such change and furnish thereafter to Customer the latter type of service, Customer agreeing to provide apparatus and equipment suitable to receive both types of service, or to make such change in Customer's apparatus and equipment as may be necessary when Public Service requires it at Customer's expense.

Nothing herein contained shall be construed as obligating Public Service to furnish service of a greater capacity than that which may be safely transmitted over

its 13,000 volt line; it being further understood and agreed that Customer's requirements shall be limited to the available capacity of the Public Service transmission line, but Customer's demand in no case shall be limited to less than the five hundred thirty-three (533) horse power (four hundred (400) kilowatts) herein contracted for.

It is understood and agreed that Public Service shall not supply electrical energy in municipalities in New Jersey east of the established boundary line, as defined in agreement between Public Service and Eastern New Jersey Power Company dated November 24, 1925, (except that nothing herein contained shall be construed as preventing Public Service from supplying electrical energy in the territory known as Camp Dix and now owned by the United States Government, located at or near Wrightstown, New Jersey, and now being supplied with electric service by Public Service, either during the period of this agreement or in the future), nor shall Customer supply electrical energy in any municipality in said state west of said boundary line, nor in Camp Dix.

This contract is made upon the following terms and conditions:

1. Bills for service furnished shall be payable upon presentation.

2. No change shall be made in customer's equipment, nor in the type, size or total electrical capacity of the devices connected to the service, nor shall the electrical energy be used except for the equipment scheduled, nor shall any other electrical service be introduced or permitted in connection with such equipment without previous written notice to and written consent of Public Service.

3. Public Service will furnish meter and service apparatus necessary to connect customer's equipment with its lines in accordance with Public Service wiring and

service connection rules. All apparatus furnished at the expense of Public Service shall remain its property and may be removed by it at any time after the discontinuance of service. The wiring, equipment and appurtenances shall be furnished by customer, and shall conform to the National Electrical Code, and to the rules and regulations of Public Service, and to all lawful municipal regulations.

4. All repairs to customer's property shall be made by customer, who shall maintain the equipment in the condition required by the Fire Underwriters or by Public Service.

5. Customer shall provide for the safe-keeping of the meter and other apparatus of Public Service, and shall not interfere with such equipment nor permit access thereto, except by authorized employees of Public Service. In case of loss or damage to the property of Public Service from the act or negligence of the customer or his agents or servants, or of failure to return apparatus supplied by Public Service, customer shall pay to Public Service the value of such property.

6. Public Service shall use all due diligence in providing a regular and uninterrupted supply of electrical energy, but in case the supply of electrical energy shall be interrupted or be defective or fail by reason of accident, State or municipal interference, or other cause, Public Service shall not be liable therefor; but, should such interruption, defect or failure in the service result from causes within the control of Public Service, customer may have the service discontinued by written notice immediately delivered to Public Service.

7. Public Service shall have right of access to customer's premises at all reasonable times for the purpose of reading meters, inspecting or repairing apparatus used in connection with its service, or removing its property.

Attest:
O. FELLER,
Secretary.

From document filed in Legal Record Dept. E. E. L.

INTERVENOR'S EXHIBIT NO. 4

INTERCONNECTION AGREEMENT
Between
NEW JERSEY POWER & LIGHT COMPANY
and
JERSEY CENTRAL POWER & LIGHT COMPANY

THIS AGREEMENT made this 6th day of February, 1937, by and between NEW JERSEY POWER & LIGHT COMPANY, a corporation organized under the laws of the State of New Jersey, hereinafter referred to as "Power Company," and JERSEY CENTRAL POWER & LIGHT COMPANY, a corporation organized under the laws of the State of New Jersey, hereinafter referred to as "Jersey Central."

WITNESSETH:

WHEREAS, Power Company and Jersey Central separately own and operate electric systems; and

WHEREAS, the parties hereto now have an interconnection between their respective systems near Boonton, New Jersey; and

WHEREAS, it may be desirable in the future to make interconnections at other points in order to afford the means of interchanging energy between the two systems on a basis that will be for their mutual advantage and will render increased protection of service to all customers; and

WHEREAS, the parties hereto desire to enter into an arrangement for the purchase and sale and/or the interchange of electric energy under certain terms and conditions:

NOW, THEREFORE, in consideration of the premises and of the mutual covenants and conditions hereinafter set forth, the parties hereto do agree as follows:

ARTICLE I

CANCELLATION OF EXISTING AGREEMENT

The existing agreement between Power Company and Jersey Central, dated March 27, 1935, covering the purchase and sale and the interchange of electric energy between the parties hereto shall be terminated at the time when this new agreement becomes effective.

ARTICLE II

FACILITIES TO BE MADE AVAILABLE

Power Company owns and maintains a wood pole transmission line carrying two (2) 33,000 volt circuits, which connects with a similar transmission line carrying similar circuits, owned and maintained by Jersey Central, at a point in Morris County, New Jersey, located on the right-of-way of the Boonton Branch of the Delaware, Lackawanna & Western Railroad Company approximately twelve feet (12') south of the intersection of the boundary line of Denville Township and the common boundary line of Mountain Lakes Borough and Parsippany-Troy Hill Township.

It is agreed between the parties hereto that, in order to fully carry out the intent of this agreement, it will be necessary to establish one or more interconnections between Power Company and Jersey Central which will

allow the transfer of larger blocks of power than is possible over the existing interconnection. The costs of establishing such additional interconnections shall be borne by the two companies under a plan to be mutually agreed upon. Each of the parties hereto will make available its facilities for such additional interconnections as may be required.

ARTICLE III

OPERATION

Each party hereto shall adjust, maintain and operate their portion of such interconnection facilities in accordance with good standard practice so as to carry out, to the greatest extent practicable and reasonable, the intent of this agreement and shall from time to time make such replacements and renewals as may be required to insure such facilities being in good operating condition.

In order to avoid interference with the operation of the system of either company, both parties hereto agree to confer regarding the operation in parallel with the system of any other company. Any excess KVA capacity in service in either system may be utilized in absorbing the wattless current of both systems. The cost of generating and transmitting this wattless current shall be apportioned between the two companies in proportion to the respective benefits obtained.

ARTICLE IV

SERVICES TO BE RENDERED

(A) Firm Power. Jersey Central agrees to sell and Power Company agrees to purchase firm power in the minimum amount of 3,000 KW and 666,666 KWH per month and to pay for this energy at the following rate:

Demand Charge $2,500.00 per month
Energy Charge Economy Flow prices as hereinafter described.

"The terms and conditions governing the price of any additional firm power which Power Company may desire and which Jersey Central may be willing to supply will be agreed upon at a conference between the parties hereto but such additional power shall be at a demand charge of not less than One ($1.00) Dollar per KW per month.

(B) Emergency Power. In the event of breakdown of equipment, unusual load demands or other unusual or abnormal conditions in the system of either party resulting in need by that party for energy in excess of that available from its normal sources of supply, that party may call on the other party to supply such emergency energy as it may have available and may be able to supply. The party called upon to supply such emergency energy to be the sole judge of the availability of and its ability to supply such energy.

Full cost (not including any fixed charges on investment) of such breakdown or emergency service shall be borne by the receiving company, plus an overhead charge of 25%, unless some other charge is mutually agreed upon by the parties hereto.

(C) Economy Flow Service. Economy Flow Energy shall be defined as energy supplied by one company to the other, which energy could have been supplied to its own system by the receiving company, but at a cost higher than that of the supplying company.

While each company shall at all times be the sole judge of its ability to supply or to receive such energy, it is the intent of this agreement that economy flow energy will be transferred between the two companies when it is mutually profitable to do so.

The rate to be paid per kilowatt hour for such economy flow energy shall be the sum of the following three items: (a) The incremental coal cost per KWH at the generating station bus plus an overhead charge of 20%. The price of coal used in determining coal costs shall be the cost of coal delivered alongside of plants, plus 5% to cover storage, handling and shrinkage plus 5¢ per ton for unloading. (b) Incremental maintenance cost, which shall be one tenth (1/10) of one mill (.001) per KWH. (c) A percentage of items (a) plus (b) to cover transformation and transmission losses from the bus bar to the point of delivery. Such percentage shall be determined by the engineers of the two companies.

If it becomes necessary to operate additional units or plants for the supplying of such economy flow energy, there shall be added to the cost as above determined such additional cost for fuel, labor and maintenance as will fully reimburse the supplying company for all expenses to which it has been subjected, by reason of the transfer of such economy flow energy.

ARTICLE V

METERING

All energy supplied by either company at the interconnection now existing, as described in Article II, shall be measured by metering equipment now installed in the Boonton substation of Jersey Central, which metering equipment is now owned jointly by the two parties hereto.

All energy supplied by either company at interconnection points, to be decided upon later, shall be measured by metering equipment at such interconnection point to be mutually agreed upon.

Said metering equipment may be inspected or tested by either party in the presence of representative of the

other party at such times as may be mutually agreed upon.

Any meter found to be not more than two per cent. in error shall be considered correct. If any meter shall be found in error in excess of two per cent., the consumption as recorded since the last monthly reading previous to the test shall be corrected by one-half of the percentage in error, provided this percentage is less than ten percent., but no correction shall extend back beyond the date of any prior reading. Should the error in the meter exceed ten percent., the probable consumption shall be mutually agreed upon.

ARTICLE VI

TERMS OF CONTRACT

This agreement shall become effective upon the date hereof and shall continue in full force and effect for a period of five (5) years and thereafter until terminated as herein provided, to wit, either party shall have the right to terminate this agreement by giving to the other party hereto not less than two (2) years notice in writing of its intention to terminate this contract in its entirety, and this agreement shall thereupon terminate on the date specified in said notice, provided, however, that no notice shall operate to terminate this agreement prior to December 31, 1942.

It is agreed, however, between the parties hereto that the minimum charge for firm power, as outlined in Article IV, shall not be made effective until a new interconnection is established between the systems of the Power Company and Jersey Central.

ARTICLE VII

TERMS OF PAYMENT

Bills shall be rendered monthly for all service pro-

vided by the terms of this contract in accordance with the charges herein provided, and shall become due and payable within fifteen (15) days from the receipt thereof.

ARTICLE VIII
INDEMNITY

Each party shall save the other party harmless of and from any and all loss and damage by reason of any bodily injury, death, or damage to property caused or sustained in that portion of the interconnecting facilities owned, controlled or made available by it, notwithstanding that a judgment may be rendered against the other party hereto; except that each party shall be responsible for all claims of its own employes, agents and servants growing out of any Workmen's Compensation Law. It is expressly agreed that neither party shall be liable for consequential damages under this agreement.

ARTICLE IX
INCREASED TAXES

Either party hereto selling energy as herein provided to the other shall be reimbursed by the other against the imposition of any new taxes or any increased costs due to actions of any governmental, state or regulatory body relating to the production or sale of power under this contract.

ARTICLE X

In order to fully carry out the intentions and spirit of this agreement each company shall, when requested, supply to the other company all data and information which may be used or useful in arriving at the cost of emergency power and economy flow energy as covered by Article IV.

ARTICLE XI

The terms and provisions of this agreement shall inure to and bind not only the parties hereto, but also their respective successors and assigns; provided, however, that no assignment thereof shall be made by either party hereto without the written consent of the other.

NEW JERSEY POWER AND LIGHT COMPANY,
J. M. HERR,
Vice-President.

Attest:
C. A. DAUGHERTY,
Secretary.

JERSEY CENTRAL POWER AND LIGHT COMPANY,
By: T. R. CRUMLEY,
President.

Attest:
RUSSELL W. AUL,
Asst. Secretary.

(Original filed in Legal Record Dep't. by E. E. P.)

RESPONDENT'S EXHIBIT NO. 1

PUBLIC SERVICE ELECTRIC AND GAS COMPANY

Newark, New Jersey.
January 20, 1936.

Mr. F. D. Campbell, President,
Staten Island Edison Corporation,
St. George, Staten Island, N. Y.

Dear Sir:

The operation of the interconnection between Staten Island Edison Corporation and Public Service Electric and Gas Company has heretofore been entirely by oral arrangement. Such operation has been satisfactory but it is now desirable that the basic terms under which power has been, and shall continue to be, interchanged be stated and agreed to by the two companies.

The charge for emergency service for each day shall be ten cents (10¢) per kilowatt of greatest average demand in any even quarter-hour period of that day, this unit of measurement being designated as a kilowatt-day, which charge is to be paid monthly.

At the end of each twelve-month period beginning December 1 the excess of kilowatt-days used by one company over the kilowatt-days used by the other company shall be subject to an additional capacity charge as follows:

1¢ per kilowatt-day for the first 5,000 kilowatt-days
2¢ per kilowatt-day for the second 5,000 kilowatt-days
3¢ per kilowatt-day for the third 5,000 kilowatt-days
4¢ per kilowatt-day for the fourth 5,000 kilowatt-days

and so on, up to 20¢ for the twentieth 5,000 kilowatt-days' excess use and 20¢ per kilowatt-day for all additional excess use.

All energy associated with emergency power flow shall be charged at the rate of eight mills ($0.008) per kilowatt-hour.

Economy energy is energy interchanged as a result of cost differentials on a schedule mutually agreed upon from day to day. The rate for economy energy shall be based on the cost to the sending company and the replacement value to the receiving company and shall be such that the savings resulting from the interchange shall be divided equally between the two companies.

Incidental energy is energy flowing on the interconnection tie when no scheduled interchange exists. The rate for incidental energy shall be mutually agreed upon from time to time depending upon the operating conditions of the two systems.

This arrangement may be terminated by either party upon reasonable notice.

If the above meets with your approval kindly sign both copies and return one of them to me.

Yours very truly,

J. T. BARRON,
Vice President
in Charge of Electric Operation.

Approved:
F. D. CAMPBELL,
President,
Staten Island Edison Corporation.

RESPONDENT'S EXHIBIT NO. 2

STATEN ISLAND EDISON CORPORATION
PURCHASES OF EMERGENCY ENERGY
AUGUST 26, 1935 to DECEMBER 31, 1935

Hours

Date	*From*	*To*	*KWH*
Nov. 3	6:49 AM	6:50 AM	None

STATEN ISLAND EDISON CORPORATION
PURCHASES OF EMERGENCY ENERGY
1936

Hours

Date	*From*	*To*	*KWH*
Feb. 25	6:44 AM	6:46 AM	None
June 18	7:35 PM	7:39½ PM	383
Aug. 12	9:07 AM	9:08 AM	75
Aug. 13	2:25½ AM	2:47 AM)	3213
	3:07 AM	3:11 AM)	
Dec. 11	8:29 AM	8:31 AM	54
			3725

STATEN ISLAND EDISON CORPORATION
PURCHASES OF EMERGENCY ENERGY
1937

Hours

Date	*From*	*To*	*KWH*
Feb. 22	1:44 AM	5:50 AM	3400
June 3	2:38 PM	2:39 PM	None
Aug. 21	7:06 AM	7:08 AM	None

STATEN ISLAND EDISON CORPORATION
PURCHASES OF EMERGENCY ENERGY
January 1, 1938 to March 14, 1938

Date	*Hours From*	*To*	*KWH*
Jan. 25	1:00 AM	3:35 AM	1000

RESPONDENT'S EXHIBIT NO. 3

STATEN ISLAND EDISON CORPORATION
PURCHASES OF ECONOMY ENERGY
August 26, 1935 to December 31, 1935

Date	*Hours From*	*To*	*KWH*
Aug. 27	9:00 AM	4:00 PM	7900
Sept. 1	7:45 PM	10:00 PM	1900
Sept. 8	7:25 PM	10:30 PM	6300
Sept. 9	5:00 PM	6:40 PM	4800
Sept. 15	8:00 PM	10:00 PM	1800
Sept. 29	6:15 PM	9:30 PM	4700
Oct. 6	5:45 PM	10:00 PM	8400
Oct. 13	6:30 PM	9:30 PM	4000
Oct. 27	5:30 PM	9:30 PM	4800
Nov. 3	5:30 PM	9:45 PM	7200

STATEN ISLAND EDISON CORPORATION
PURCHASES OF ECONOMY ENERGY
1936

Date	*Hours From*	*To*	*KWH*
Mar. 27	7:45 AM	3:00 PM	13700
Apr. 27	7:45 AM	10:30 AM	3500

[illegible] ISLAND POWER CORPORATION

Summary of transactions with Public Service Electric and Gas Company
August 16, 1925 to March 16, 1928

FEDERAL POWER COMMISSION
Docket No. 27-558
Rep Hearing Ex. No. 5

	1925 August 16th to December 31st	1926	1927	1928 January 1st to March 16th
KILOWATT HOURS				
Incidental flows				
Delivered to Public Service Electric and Gas Company	1 185 000	3 111 400	3 119 200	615 000
Received from Public Service Electric and Gas Company	1 083 600	2 953 275	3 078 400	579 000
Excess of deliveries over receipts	111 400	158 125	40 800	36 000
Purchases:				
Economy flow	51 800	389 600	15 600	
Emergency	None	5 785	1 408	1 000
Total purchases	51 800	395 385	17 008	1 000
Excess of net delivered to Public Service Electric and Gas Company of incidental flow - energy over purchases from Public Service Electric and Gas Company	59 300	175 800 *	25 800	35 000
DOLLARS				
Purchases:				
Economy flow	$ 851 44	$ 1 321 96	$ 89 65	
Emergency	865 11	1 769 45	190 34	$ 40 00
Total purchases	$ 496 55	$ 2 691 41	$ 280 37	$ 40 00
Incidental flows				
Delivered to Public Service Electric and Gas Company	$ 3 857 50	$ 8 400 78	$ 8 421 84	$ 1 660 50
Received from Public Service Electric and Gas Company	2 757 53	7 973 84	8 306 28	1 562 50
Excess of deliveries over receipts	$ 899 97	$ 426 94	$ 115 56	$ 97 88
Excess of purchases from Public Service Electric and Gas Company over net deliveries of incidental energy to that company	$ 196 58	$ 2 264 47	$ 164 81	$ 49 20 *

*Denotes red figure.

Date	*From*	*To*	*KWH*
Apr. 29	7:35 AM	4:00 PM	4000
May 4	7:50 AM	1:20 PM	7600
May 5	8:15 AM	9:00 AM	1400
May 6	7:50 AM	9:00 AM	1000
May 10	8:45 PM	9:50 PM	900
May 12	7:00 AM	12:00 N	5900
May 13	7:00 AM	12:00 N	6300
May 14	7:45 AM	12:00 N	4200
May 15	7:50 AM	9:05 AM	1400
May 25	7:00 AM	12:15 PM	5300
June 2	8:05 AM	10:10 AM	1800
June 4	7:00 AM	10:10 AM	4300
June 7	8:45 PM	10:30 PM	4000
June 9	8:10 AM	7:00 PM	14800
June 11	7:50 AM	5:30 PM	13300
June 12	7:00 AM	6:00 PM	16700
June 16	8:10 AM	7:00 PM	24200
June 17	7:45 AM	5:00 PM	14800
June 21	8:55 PM	10:35 PM	5200
June 23	7:40 AM	5:00 PM	10600
June 25	7:40 AM	5:30 PM	16500
June 26	8:00 AM	9:05 AM	1200
June 28	9:05 PM	10:40 PM	2800
June 29	5:55 PM	6:40 PM	1300
July 1	7:45 AM	4:30 PM	8900
July 3	8:00 AM	5:00 PM	8600
July 4	8:55 PM	11:00 PM	2600
July 5	8:55 PM	11:00 PM	6200
July 6	7:00 AM	5:00 PM	7100
	3:00 PM	7:00 PM	1600
July 7	8:00 AM	7:00 PM	38300
July 8	7:45 AM	4:45 PM	14200
July 9	7:45 AM	8:00 PM	30100
July 12	8:40 PM	11:05 PM	11300
July 14	7:45 AM	10:45 AM	14000

STATEN ISLAND EDISON CORPORATION
PURCHASES OF ECONOMY ENERGY
1937

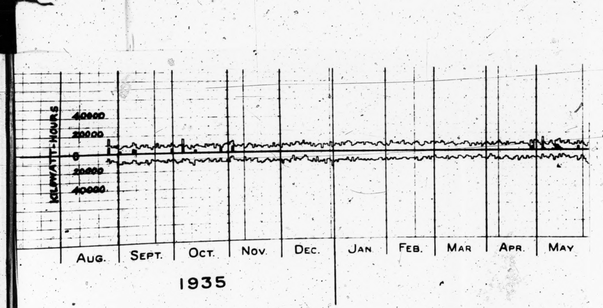
Date	*Hours From*	*To*	*KWH*
April 29	7:30 AM	5:45 PM	9100
April 30	10:00 AM	5:30 PM	4500
			13,600 KWH

STATEN ISLAND EDISON CORPORATION

Monthly summary of purchases of electric energy (other than "Incidental Flow") from Public Service Electric and Gas Company
August 26, 1935 to March 14, 1938

FEDERAL POWER COMMISSION
Docket No. IT-5518
Rep Hearing Ex. No. 4

Month	Number of Transactions	Duration Total Days	Hours	Minutes	Average Hours	Minutes	Purchases of electric energy (other than "Incidental Flow") kwh Economy Flow	Energency	Total	Amount Economy Flow	Energy and Demand Charge	Fuel Adjustment	Total	Total
1935														
August (26th to 31st)	1		7	0			7 900			$ 34 33				
September	5		12	5			19 900			86 34				
October	3		11	15			17 200			79 81				
November	1			1				None			$ 14 70	$ 250 41		
	1		4	15			7 200			30 56				
Total	11	1	30	36			51 000	None	51 000	$ 251 44	$ 14 70	$ 250 41	$ 265 11	$ 496 55
Economy Flow	10				3	27								
Emergency	1				0	1				—				
1936														
February	1		0	2				None			$ 12 00			
March	1		7	15			13 700			$ 54 86				
April	8		11	10			7 500			42 16				
May	9	1	5	15			34 000			157 41				
	1			14				383			156 06			
June	14	3	10	50			131 500			542 55				
July	11	2	23	33			142 900			584 98				
August	3		0	26½				3 288			634 60			
November												$ 114 66		
December	1		0	2				54			22 13			
Total	43	6	12	40			389 600	3 725	393 325	$1 321 96	$ 1 024 79	$ 114 66	$1 169 45	$ 2 491 41
Economy Flow	37				5	28								
Emergency	6				0	6								
1937														
February	1		4	6				3 600			$ 147 80			
April	8		17	45			13 600			$ 89 63				
June	1		0	1				None			16 00			
August	1		0	2				None			10 70			
November												$ 16 84		
Total	5	0	21	54			13 600	3 600	17 000	$ 89 63	$ 173 90	$ 16 84	190 74	$ 280 37
Economy Flow	2				8	52								
Emergency	3				1	23								
1938														
January	1	0	2	35				1 000	1 000		$ 48 00		$ 48 00	$ 48 00
Emergency					2	35								
Total - August 26, 1935 to March 14, 1938	69	10	21	45	4	22	395 000	8 125	403 125	$1 643 03			$1 673 30	$ 3 316 33
Number of days - August 26, 1935 to March 14, 1938		9 30												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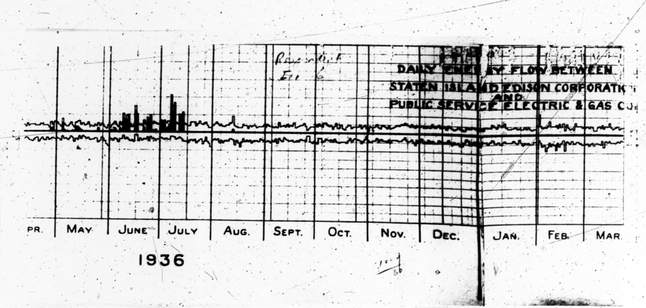
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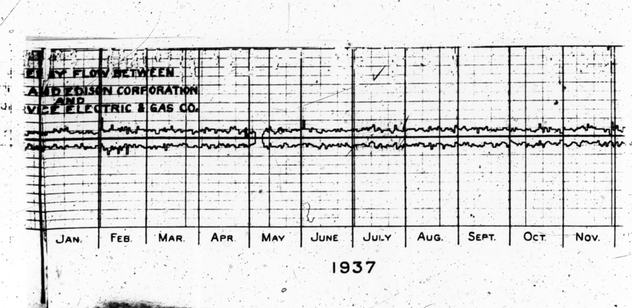
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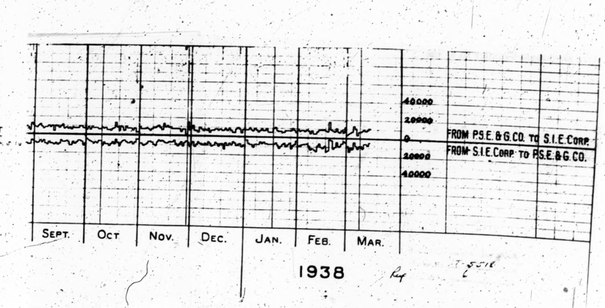
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RESPONDENT'S EXHIBIT NO. 7

	Total Net Generated by J. C. P. & L. Co. (A)	S. I. E. Co. Received from P. S. E. & G. Co. (B)	P. S. E. & G. Co. Received from S. I. E. Co. (C)	Net Interchange between P. S. E. & G. Co. and S. I. E. Co. (D)	$\frac{B}{A}$ (%)	$\frac{D}{A}$ (%)
1935						
Aug.	32,656,525	338,200	260,400	+ 77,800	1.04	+ 0.238
Sept.	27,587,100	250,700	260,900	— 12,200	0.91	— 0.044
Oct.	30,871,000	261,200	268,900	— 7,700	0.85	— 0.025
Nov.	28,570,350	231,000	256,200	— 25,200	0.81	— 0.088
Dec.	30,511,350	257,800	294,200	— 36,400	0.85	— 0.119
1936						
Jan.	28,738,050	264,900	297,900	— 33,000	0.92	— 0.115
Feb.	25,280,000	254,400	254,900	— 500	1.00	— 0.002
Mar.	26,318,800	261,700	236,300	+ 25,400	0.99	+ 0.096
Apr.	25,826,400	248,700	252,000	— 3,300	0.95	— 0.013
May	25,580,050	260,900	252,200	+ 8,700	1.02	+ 0.034
June	26,486,400	360,900	234,200	+ 126,700	1.36	+ 0.478
July	30,635,850	406,800	264,300	+ 142,500	1.33	+ 0.468
Aug.	31,867,500	264,700	291,200	— 26,500	0.83	— 0.083
Sept.	30,103,700	234,300	252,100	— 17,800	0.78	— 0.059
Oct.	30,746,600	243,800	246,300	— 2,500	0.79	— 0.008
Nov.	29,240,000	228,300	260,700	— 32,300	0.78	— 0.110

	Total Net Generated by J. C. P. & L. Co. (A)	S. I. E. Co., Received from P. S. E. & G. Co. (B)	P. S. E. & G. Co. Received from S. I. E. Co. (C)	Net Interchange between P. S. E. & G. Co. and S. I. E. Co. (D)	$\frac{B}{A}$ (%)	$\frac{D}{A}$ (%)
Dec. 1937	30,732,800	257,200	269,400	— 12,200	0.69	— 0.040
Jan.	29,129,650	267,800	253,400	+ 14,400	0.92	+ 0.049
Feb.	26,617,000	288,800	287,700	+ 1,100	1.08	+ 0.004
Mar.	29,186,350	264,600	278,500	— 13,900	0.91	— 0.048
Apr.	29,016,500	271,200	247,300	+ 23,900	0.93	+ 0.082
May	29,619,400	218,000	227,300	— 9,300	0.74	— 0.031
June	31,141,600	265,000	248,000	+ 17,000	0.85	+ 0.055
July	33,055,600	273,000	271,000	+ 2,000	0.83	+ 0.006
Aug.	34,206,900	272,000	270,000	+ 2,000	0.79	+ 0.006
Sept.	31,781,600	257,000	263,000	— 6,000	0.81	— 0.019
Oct.	31,898,950	235,000	255,000	— 20,000	0.74	— 0.063
Nov.	28,073,500	247,000	246,000	+ 1,000	0.88	+ 0.003
Dec.	32,099,600	234,000	272,000	— 38,000	0.73	— 0.118
1938						
Jan.	30,069,300	240,000	245,000	— 5,000	0.80	— 0.017
Feb.	26,381,000	229,000	249,000	— 20,000	0.87	— 0.076
Mar.	29,926,100	270,000	256,000	+ 14,000	0.90	+ 0.047

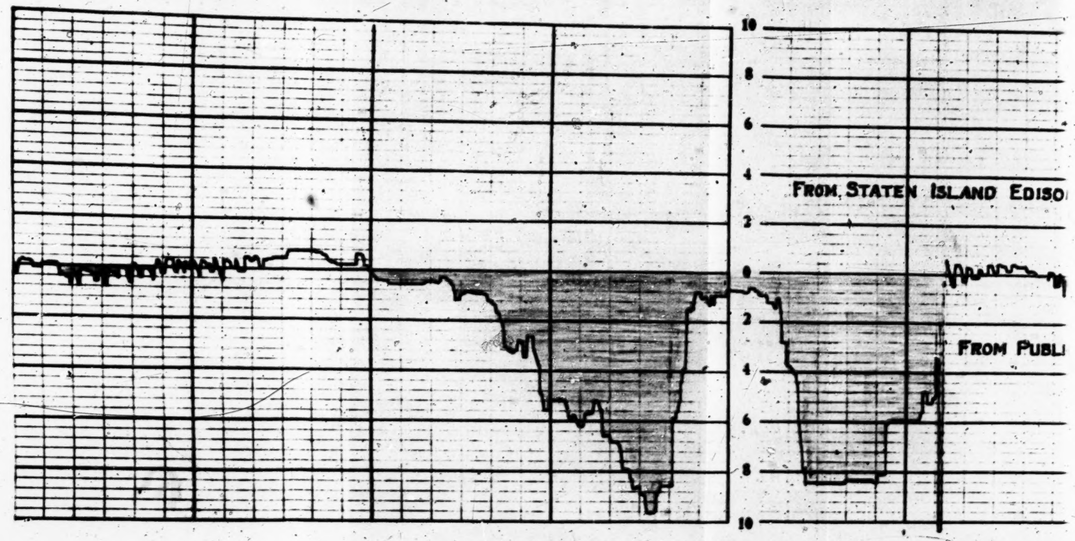
RESPONDENT'S EXHIBIT NO. 8 10781/2

FEDERAL POWER COMMIS.

Docket No. IT-5518

Rep Exhibit No. 8

Lot No. 40000 B-3 Westinghouse Recording Instrument. Circuit No._____ Chart Style No. 534478 Date_____



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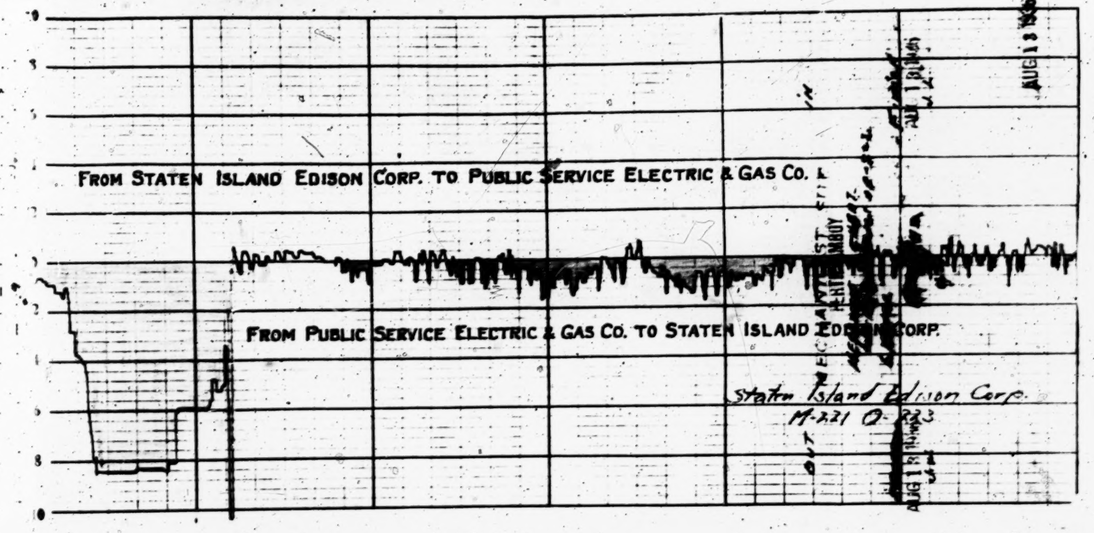
Lot No. 121212 B-2 Westinghouse Rec

Lot No. 40000 B-3 Westinghouse Recording Instrument. Circuit No._____ Chart Style No. 534478 Date_____



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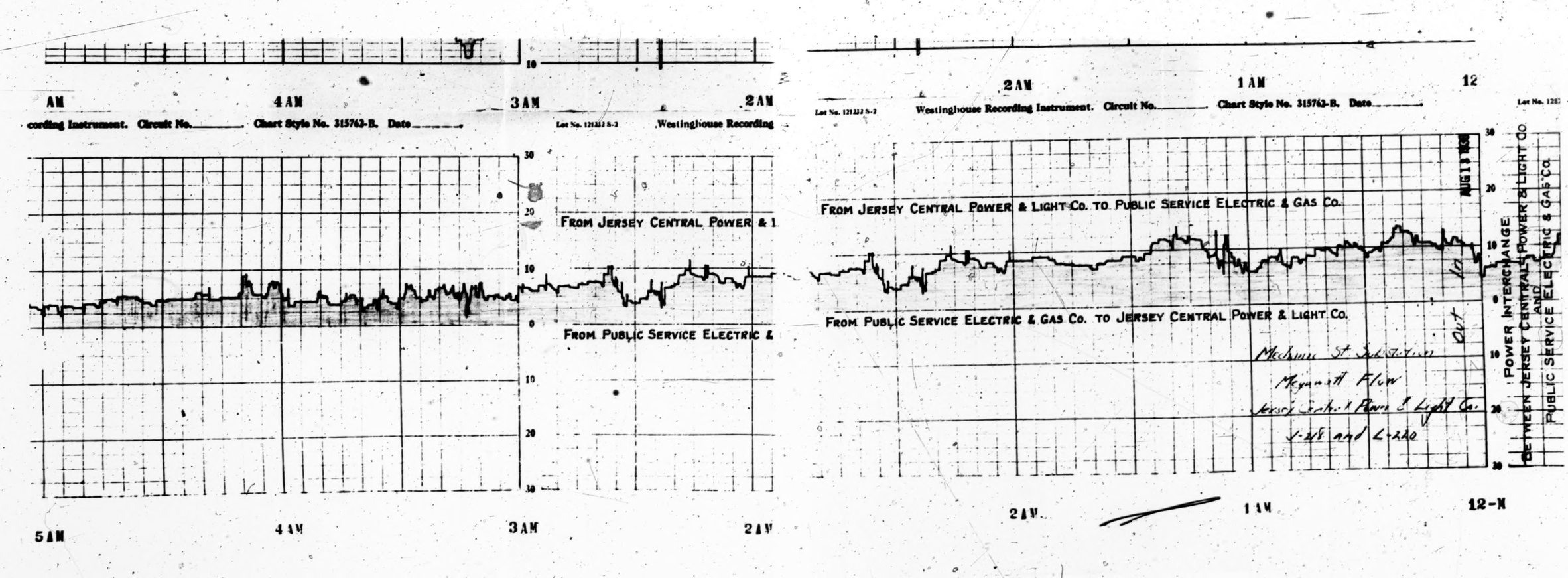
Lot No. 121212 B-2 Westinghouse Recording Instrument. Circuit No._____ Chart Style No. 315763-B. Date_____

Lot No. 121

POWER INTERCHANGE
BETWEEN STATEN ISLAND EDISON CORP.
AND
PUBLIC SERVICE ELECTRIC & GAS CO.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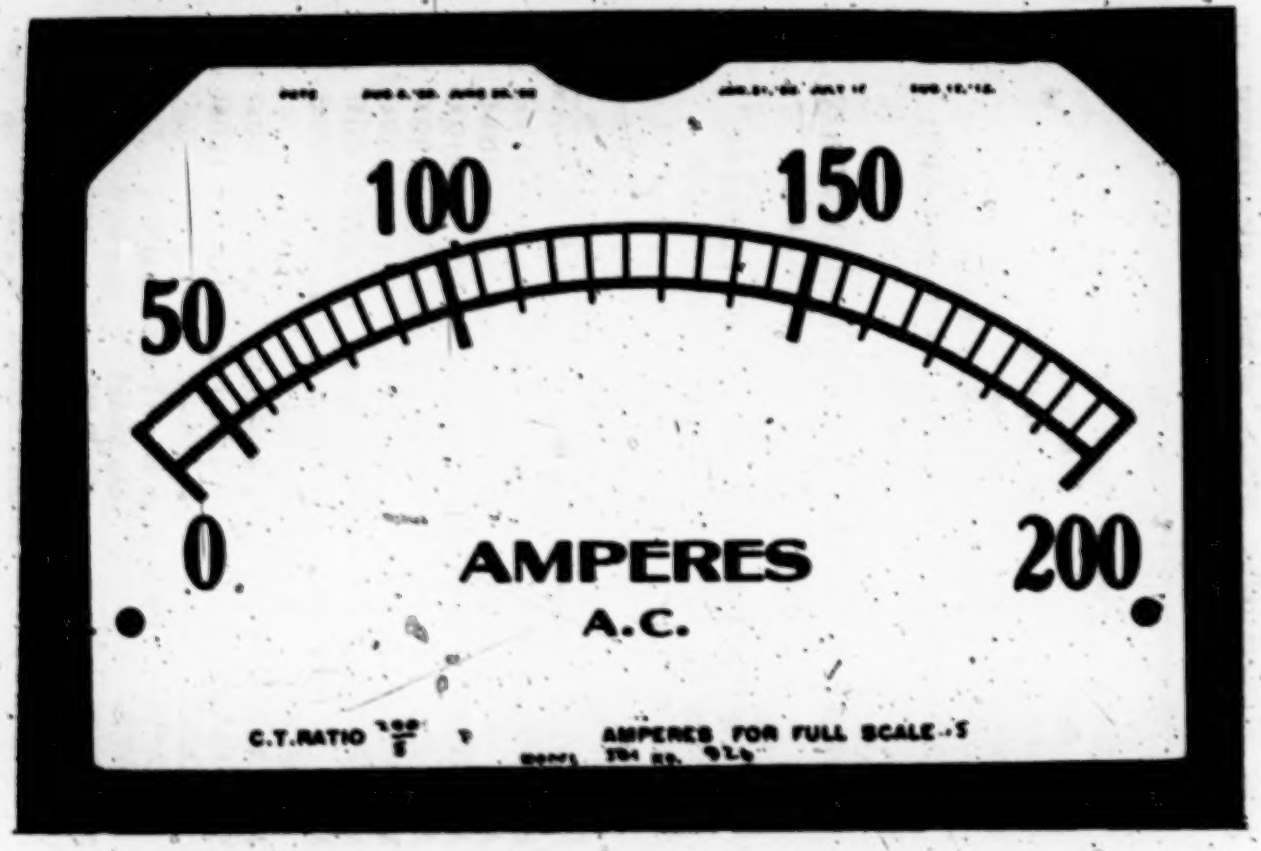
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C.T.RATIO
AMPERES FOR FULL SCALE

SUPPLEMENTAL EXHIBITS SUBMITTED PURSUANT TO DIRECTION OF TRIAL EXAMINER AT HEARING CONCLUDED OCTOBER 10, 1938

Federal Power Commission
Received
Oct. 20, 1938

Furnished by Respondent
Directed by Examiner to be furnished (489)
OK LM

STATEN ISLAND EDISON CORPORATION
LIVINGSTON POWER STATION

RUNNING TIME 6000 K. W. TURBINE
JAN. 1ST, 1937 TO SEPT. 26TH, 1938

Date		*Time on*	*Time off*	*K. W. H. Generated*
		1937		
Feb.	27	10:05 a m	3:19 p m	11500
Apr.	3	7:05 a m	1:21 p m	16900
Apr.	5	6:52 a m	2:50 p m	21600
Apr.	25	7:36 p m	10:54 p m	9800
May	5	4:50 p m	9:55 p m	5500
May	6	4:58 p m	10:27 p m	6100
May	7	5:10 p m	9:56 p m	5800
		1938		
June	10	3:08 p m	4:54 p m	3400
Sept.	1	11:53 a m	4:36 p m	11700

Federal power Commission
Docketed
10-20-38
HLS
Docket Section
Secretary's Office

RUNNING TIME 10000 K. W. TURBINE JAN. 1ST, 1937 TO SEPT. 26TH, 1938

Date	*Time on*	*Time off*	*K. W. H. Generated*
		1937	
Feb. 1	6:20 a m	4:11 p m	33300
Mar. 6	9:08 a m	11:03 a m	3600
Mar. 22	6:30 a m	4:55 p m	28400
Mar. 26	6:28 a m	6:15 p m	34000
Apr. 19	6:47 a m	4:45 p m	25100
Apr. 26	6:56 a m	11:35 p m	54600
Apr. 27	6:46 a m	11:30 p m	50200
Apr. 28	6:43 a m	11:20 p m	41200
Apr. 29	5:40 p m	11:40 p m	24400
Apr. 30	6:47 a m	9:57 a m	
Apr. 30	5:30 p m	11:34 p m	26400
May 1	6:20 p m	11:30 p m	16400
May 2	7:30 p m	10:44 p m	8800
May 3	7:00 a m	11:21 p m	40200
May 4	6:57 a m	Still running	48000
May 5	Still running	Still running	63000
May 6	Still running	Still running	64100
May 7	Still running	Still running	58000
May 8	Still running	3:07 a m	
May 8	3:33 a m	Still running	59400
May 9	Still running	1:04 a m	
May 9	7:48 p m	10:59 p m	11400
May 10	6:50 a m	Still running	43200
May 11	Still running	1:16 a m	
May 11	6:50 a m	11:25 p m	49600
May 12	6:53 a m	6:28 p m	26700
May 13	6:51 a m	4:23 p m	19600
May 24	7:07 a m	5:33 p m	22600
June 7	7:03 a m	11:43 p m	48300
June 8	6:26 a m	11:35 p m	48700
June 9	6:50 a m	11:40 p m	47000
June 10	6:45 a m	11:39 p m	56300
June 11	6:46 a m	11:30 p m	47900
June 12	7:14 p m	11:39 p m	15700

Date	*Time on*	*Time off*	*K. W. H. Generated*
June 13	8:13 p m	11:27 p m	8100
June 14	6:58 a m	Still running	50800
June 15	Still running	12:20 a m	
June 15	6:58 a m	11:39 p m	49600
June 16	6:58 a m	11:42 p m	47800
June 17	7:04 a m	11:39 p m	51000
June 18	7:04 a m	11:38 p m	48100
June 19	6:35 p m	11:27 p m	17700
June 20	8:15 p m	10:54 p m	6100
June 21	7:13 a m	Still running	54700
June 22	Still running	12:57 a m	
June 22	7:02 a m	Still running	49800
June 23	Still running	12:22 a m	
June 23	6:52 a m	11:34 p m	48900
June 24	6:53 a m	2:12 p m	17400
July 2	6:48 a m	6:06 p m	28300
Aug 3	1:07 p m	2:19 p m	3800
Aug. 5	7:03 a m	5:37 p m	26700
Aug. 28	7:01 a m	5:23 p m	25600
Sept. 3	7:05 a m	6:35 p m	29900
Sept. 23	6:41 a m	6:35 p m	31900
Oct. 12	6:48 a m	5:33 p m	27200
Nov. 27	7:01 a m	4:34 p m	23700
		1938	
Jan. 14	6:12 a m	3:18 p m	26300
Jan. 17	6:10 a m	3:07 p m	35500
Jan. 26	6:08 a m	3:44 p m	26200
Feb. 4	6:09 a m	5:13 p m	27100
Feb 14	6:29 a m	5:23 p m	25900
Mar. 8	6:30 a m	5:40 p m	28000
Mar. 27	6:10 p m	10:49 p m	12400
Mar. 28	6:29 a m	5:45 p m	28700
Apr. 25	5:42 p m	11:30 p m	24500
Apr. 26	5:09 p m	11:29 p m	27800
Apr. 27	5:27 p m	11:27 p m	22000
Apr. 28	5:32 p m	11:26 p m	21300
Apr. 29	2:00 p m	11:20 p m	58700

Date	*Time on*	*Time off*	*K. W. H. Generated*
Apr. 30	6:33 p m	11:21 p m	18600
May 1	7:46 p m	10:53 p m	7700
May 2	5:32 p m	11:36 p m	25500
May 3	4:45 p m	11:33 p m	29000
May 4	5:28 p m	11:38 p m	29700
May 5	5:29 p m	11:27 p m	23300
May 6	12:57 p m	11:38 p m	71800
May 7	7:27 p m	11:19 p m	15300
May 8	7:27 p m	10:47 p m	8400
May 9	5:00 p m	11:21 p m	29800
May 10	4:08 a m	11:22 p m	62000
May 15	7:49 p m	10:52 p m	7400
May 24	5:20 p m	11:15 p m	35300
June 3	7:14 a m	5:17 p m	24500
June 27	5:03 p m	11:31 p m	23300
June 28	5:05 p m	11:30 p m	23100
June 29	5:10 p m	11:32 p m	19600
June 30	5:13 p m	11:34 p m	19900
July 1	5:29 p m	11:35 p m	21100
July 2	8:16 p m	11:35 p m	11300
July 3	8:19 p m	11:19 p m	8900
July 4	7:27 p m	11:24 p m	12200
July 5	5:28 p m	11:35 p m	18700
July 6	5:27 p m	11:30 p m	25200
July 7	5:28 p m	11:34 p m	18100
July 8	5:03 p m	11:31 p m	20900
July 9	5:26 p m	11:35 p m	26200
July 10	8:02 p m	11:29 p m	11900
July 11	7:37 a m	Still running	80600
July 12	Still running	12:31 a m	
July 12	2:28 p m	11:37 p m	33100
July 13	5:27 p m	11:29 p m	18500
July 14	9:57 a m	11:35 p m	51100
July 15	7:50 a m	11:34 p m	59300
July 16	7:06 p m	11:32 p m	18700
July 17	4:06 p m	11:26 p m	29100
July 18	10:31 a m	11:27 p m	41700

Date	*Time on*	*Time off*	*K. W. H. Generated*
July 19	9:55 a m	3:55 p m	14900
July 29	7:16 p m	Still running	18800
July 30	Still running	12:18 a m	
July 30	7:23 p m	11:42 p m	17200
July 31	7:34 p m	11:33 p m	12200
Aug 1	7:27 a m	11:30 p m	50000
Aug. 2	7:05 a m	4:20 p m	23600
Aug. 26	6:44 a m	12:25 p m	13300
Sept. 7	11:24 a m	4:20 p m	19200

STATEN ISLAND EDISON CORPORATION
EMERGENCY POWER PURCHASED FROM PUBLIC SERVICE ELECTRIC & GAS CO.
MAR. 14TH TO SEPT. 26TH, 1938, INCL.

OK LM

Federal Power Commission
Received
Oct. 20, 1938

Federal Power Commission
Docketed
10-20-38
H L S
Docket Section
Secretary's Office

Hours

Date	*From*	*To*	*KWH*
June 18	8:46 a m	8:48 a m	0
July 20	5:29 a m	5:32 a m	0
July 29	6:49 p m	6:51 p m	
July 29	7:04 p m	7:17 p m	1000
Sept. 13	6:37 a m	6:39 a m	0

(Signed) James H. Lytle L. S.

State of New York,
County of New York, ss:

James H. Lytle being duly sworn deposes and says:

That he has caused the foregoing exhibits to be compiled from books and records of the Staten Island Edison Corporation

That the facts therein contained are true and accurate as appear from said books and records.

James H. Lytle

Sworn to before me October 19th, 1938.

Robert M. Weston,
(Seal) Notary Public
New York Co. Clerk's No. 315, Reg. No. 9W398

Term expires March 30, 1939.

STATEN ISLAND EDISON CORPORATION
ECONOMY FLOW POWER PURCHASED FROM PUBLIC SERVICE ELECTRIC & GAS CO.
MAR. 14TH TO SEPT. 26TH, 1938, INCL.

Furnished by Respondent on Oct. 19, 1938
Supplements Respondent's Exh. No. 3
Rec'd as evidence for Respondent by direction of Examiner
(485-487)

Federal Power Commission
Received
Oct. 20, 1938

OK LM

Federal Power Commission
10-20-38
H L S
Docket Section
Secretary's Office

	Hours		
Date	*From*	*To*	*KWH*
Apr. 11	7:00 a m	5:30 p m	9000
Apr. 12	7:00 a m	5:30 p m	5000
Apr. 13	7:00 a m	5:30 p m	4000
Apr. 15	7:00 a m	5:15 p m	2000
Apr. 18	7:00 a m	5:15 p m	4000
Apr. 19	9:15 a m	5:30 p m	5000
Apr. 20	7:45 a m	5:30 p m	4000
Apr. 21	7:45 a m	5:15 p m	4000
Apr. 22	7:30 a m	5:30 p m	3000
Apr. 25	7:30 a m	5:30 p m	3000
Apr. 26	7:30 a m	5:15 p m	6000
Apr. 27	7:30 a m	5:30 p m	3000
Apr. 28	7:30 a m	5:30 p m	2000
Apr. 29	7:30 a m	2:15 p m	2000
May 2	7:30 a m	5:45 p m	6000
May 3	7:30 a m	5:00 p m	8000
May 4	7:30 a m	5:30 p m	8000
May 5	7:30 a m	5:30 p m	4000
May 6	7:30 a m	1:00 p m	4000
May 9	7:30 a m	5:15 p m	13000
May 11	7:30 a m	5:30 p m	12000
May 12	7:30 a m	5:30 p m	11000
May 16	7:30 a m	5:30 p m	8000
May 17	7:30 a m	5:30 p m	7000
May 18	7:30 a m	5:30 p m	10000
May 19	7:30 a m	5:30 p m	10000
May 20	7:30 a m	2:30 p m	6000
May 23	7:30 a m	5:30 p m	11000
May 24	7:30 a m	5:30 p m	18000
May 25	7:30 a m	5:30 p m	15000
May 26	7:30 a m	5:30 p m	14000
May 31	7:30 a m	5:30 p m	14000
June 1	7:30 a m	5:30 p m	16000
June 2	7:30 a m	5:45 p m	16000
June 3	8:30 p m	10:30 p m	4000
June 6	7:30 a m	5:30 p m	20000

Date	Hours		KWH
	From	*To*	
June 6	8:30 p m	10:30 p m	4000
June 7	7:30 a m	1:30 p m	17000
June 7	8:30 p m	10:30 p m	3000
June 8	8:30 p m	10:30 p m	4000
June 9	7:30 a m	5:30 p m	11000
June 9	8:30 p m	10:30 p m	4000
June 10	7:30 a m	5:30 p m	13000
June 10	8:30 p m	10:30 p m	3000
June 11	8:30 p m	10:30 p m	3000
June 13	7:30 a m	5:30 p m	16000
June 13	8:30 p m	10:30 p m	4000
June 14	7:30 a m	3:45 p m	14000
June 14	8:30 p m	10:30 p m	3000
June 15	7:30 a m	5:30 p m	17000
June 15	8:30 p m	10:30 p m	3000
June 16	7:30 a m	5:30 p m	17000
June 16	8:30 p m	10:30 p m	5000
June 17	8:30 a m	5:30 p m	13000
June 17	8:30 p m	10:30 p m	4000
June 18	8:30 p m	10:30 p m	3000
June 20	7:30 a m	5:30 p m	17000
June 20	8:30 p m	10:30 p m	4000
June 21	7:30 a m	5:30 p m	26000
June 21	8:30 p m	10:30 p m	3000
June 22	7:30 a m	5:30 p m	25000
June 22	8:30 p m	10:30 p m	4000
June 23	7:30 a m	3:15 p m	18000
June 23	8:45 p m	10:30 p m	4000
June 24	7:30 a m	2:45 p m	13000
June 24	8:45 p m	10:30 p m	2000
June 25	8:45 p m	10:30 p m	3000
June 27	7:30 a m	5:30 p m	28000
June 27	8:30 p m	10:30 p m	4000
June 28	7:30 a m	5:30 p m	27000
June 28	8:30 p m	10:30 p m	5000
June 29	7:30 a m	5:15 p m	15000

Date	Hours From	Hours To	KWH
June 29	8:30 p m	10:30 p m	2000
June 30	7:30 a m	5:15 p m	24000
June 30	8:30 p m	10:30 p m	4000
July 1	7:30 a m	5:30 p m	17000
July 1	8:30 p m	10:30 p m	4000
July 2	8:30 p m	10:30 p m	3000
July 5	7:30 a m	5:30 p m	7000
July 5	8:30 p m	10:30 p m	2000
July 6	7:30 a m	5:30 p m	16000
July 6	8:30 p m	10:30 p m	2000
July 7	7:30 a m	5:30 p m	10000
July 7	8:30 p m	10:30 p m	4000
July 8	7:30 a m	5:15 p m	12000
July 8	8:30 p m	10:30 p m	3000
July 9	8:30 p m	10:30 p m	6000
July 11	9:00 p m	10:30 p m	3000
July 12	7:30 a m	2:45 p m	20000
July 12	8:30 p m	10:30 p m	4000
July 13	7:30 a m	5:30 p m	31000
July 13	8:30 p m	10:30 p m	3000
July 14	7:30 a m	10:15 a m	10000
July 14	8:30 p m	10:30 p m	4000
July 15	7:30 a m	8:30 a m	2000
July 15	8:30 p m	10:30 p m	4000
July 16	8:30 p m	10:30 p m	3000
July 18	7:30 a m	10:45 a m	10000
July 18	8:30 p m	10:30 p m	5000
July 19	7:30 a m	10:15 a m	9000
July 19	8:30 p m	10:30 p m	4000
July 20	8:30 p m	10:30 p m	3000
July 21	8:30 p m	10:30 p m	4000
July 22	8:30 p m	10:30 p m	2000
July 23	8:30 p m	10:30 p m	4000
July 25	8:30 p m	10:30 p m	5000
July 26	8:30 p m	10:30 p m	5000
July 27	8:30 p m	10:30 p m	4000

Date	Hours From	To	KWH
July 28	8:30 p m	10:30 p m	4000
July 29	8:30 p m	10:30 p m	5000
July 30	8:30 p m	10:30 p m	3000
Aug. 1	8:30 p m	10:30 p m	4000
Aug. 2	8:30 p m	10:30 p m	4000
Aug. 3	8:30 p m	10:30 p m	3000
Aug. 4	8:30 p m	10:30 p m	4000
Aug. 5	7:30 a m	11:15 a m	13000
Aug. 5	8:30 p m	10:30 p m	6000
Aug. 6	8:30 p m	10:30 p m	5000
Aug. 8	7:30 a m	10:00 a m	6000
Aug. 8	8:30 p m	10:30 p m	5000
Aug. 9	8:30 p m	10:30 p m	4000
Aug. 10	8:30 p m	10:30 p m	3000
Aug. 11	8:30 p m	10:30 p m	3000
Aug. 12	8:30 p m	10:30 p m	2000
Aug. 13	8:30 p m	10:30 p m	3000
Aug. 15	8:30 p m	10:30 p m	2000
Aug. 16	7:30 a m	4:15 p m	28000
Aug. 16	8:30 p m	10:30 p m	5000
Aug. 17	7:30 a m	3:30 p m	21000
Aug. 17	8:00 p m	10:30 p m	3000
Aug. 18	7:30 a m	3:15 p m	17000
Aug. 18	8:00 p m	10:30 p m	4000
Aug. 19	7:30 a m	4:30 p m	16000
Aug. 19	8:00 p m	10:30 p m	3000
Aug. 20	8:00 p m	10:30 p m	2000
Aug. 22	7:30 a m	3:30 p m	22000
Aug. 22	8:00 p m	10:30 p m	6000
Aug. 23	7:00 a m	5:30 p m	35000
Aug. 23	8:00 p m	10:30 p m	6000
Aug. 24	8:00 p m	10:30 p m	4000
Aug. 25	8:00 p m	10:30 p m	6000
Aug. 26	1:30 p m	5:30 p m	7000
Aug. 26	8:00 p m	10:30 p m	2000
Aug. 27	8:00 p m	10:30 p m	4000

Date	Hours From	Hours To	KWH
Aug. 29	7:00 a m	5:30 p m	24000
Aug. 29	8:00 p m	10:30 p m	8000
Aug. 30	7:00 a m	5:30 p m	21000
Aug. 30	7:30 p m	10:30 p m	8000
Aug. 31	7:00 a m	5:15 p m	30000
Aug. 31	7:30 p m	10:30 p m	10000
Sept. 1	7:00 a m	12:00 n	16000
Sept. 1	7:30 p m	10:30 p m	9000
Sept. 2	7:00 a m	5:15 p m	10000
Sept. 2	7:30 p m	10:30 p m	9000
Sept. 3	7:30 p m	10:30 p m	6000
Sept. 6	7:00 p m	5:30 p m	21000
Sept. 6	7:15 p m	10:30 p m	11000
Sept. 7	7:00 a m	11:30 a m	14000
Sept. 7	7:15 p m	10:30 p m	13000
Sept. 8	7:15 p m	10:30 p m	9000
Sept. 9	7:15 p m	10:30 p m	11000
Sept. 10	7:15 p m	10:15 p m	12000
Sept. 12	7:00 a m	5:00 p m	15000
Sept. 12	7:15 p m	10:30 p m	11000
Sept. 13	7:15 p m	10:30 p m	13000
Sept. 14	7:00 a m	4:30 p m	21000
Sept. 14	7:15 p m	10:30 p m	12000
Sept. 15	7:00 p m	10:30 p m	14000
Sept. 16	7:00 a m	9:15 a m	6000
Sept. 16	7:00 p m	10:30 p m	13000
Sept. 17	7:00 p m	10:30 p m	12000
Sept. 19	7:00 p m	10:30 p m	14000
Sept. 20	7:00 p m	10:30 p m	19000
Sept. 21	7:00 p m	10:30 p m	8000
Sept. 22	6:45 p m	10:30 p m	16000
Sept. 23	6:45 p m	10:30 p m	14000
Sept. 24	6:45 p m	10:30 p m	17000
Sept. 26	7:00 a m	4:30 p m	22000

(Written in pencil, appearing in upper right-hand corner):
OK
LM
#5 Supplement furnished as directed by Examiner (p 6 20)
(Stamped in upper left-hand corner):
Federal Power Commission
Received
Oct. 20, 1938

STATEN ISLAND EDISON CORPORATION

SUMMARY OF TRANSACTIONS WITH PUBLIC SERVICE ELECTRIC AND GAS COMPANY MARCH 15, 1938 TO SEPTEMBER 27, 1938

	K. W. H.	*Amount*
Incidental flow:		
Received from Public Service Electric and Gas Company	1,432,000	$ 3,866.40
Delivered to Public Service Electric and Gas Company	1,335,000	3,604.50
Excess of receipts over deliveries	97,000	$ 261.90
Purchases:		
Economy flow	1,665,000	$ 6,648.75
Emergency	1,000	514.30
Total—Purchases	1,666,000	$ 7,163.05
Excess of receipts of incidental energy and purchases over deliveries of incidental energy	1,763,000	$ 7,424.95

(Stamped):
Federal Power Commission
Docketed
10-20-38
HJS
Docket Section
Secretary's Office

State of New York,
County of New York, ss.:

William F. Morris being duly sworn deposes and says:

That he prepared the above statement from information obtained from the records of Staten Island Edison Corporation, and that the facts contained in such statement truly and correctly reflect the information appearing on such records.

Wm. F. Morris.

Sworn to before me this 19th day of October, 1938.

Henry C. Johnston,
Notary Public.

Henry C. Johnston,
Notary Public, Kings County
King's Co. Clerk's No. 106, Register No. 9038, Certificates Filed in N. Y. Clerk's No. 47, Register's No. 9-J-50, Commission expires March 30, 1939.

(Seal)

Supplement

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Docket

STATEN ISLAND EDISON CORPORATION

Monthly Summary of Purchases of Electric Energy
(Other than "Incidental Flow") from Public Service
Electric and Gas Company
March 15, 1938 to September 27, 1938

	Number of Transactions	Duration Total Days	Total Hours	Total Minutes	Average Hours	Average Minutes	Kilowatt Hours Economy	Emergency	Total	Economy
rch (15 to 31)							None	None		
ril	14	5	16		9	43	56,000			$ 432.15
y	18	7	3	15	9	31	179,000			869.21
e	43	9	18	30	5	27	445,000			1,749.33
e	1			2		2				
	36	5	6	15	3	30	237,000	None		
y	3			18		6				879.45
gust	39	6	11		4		359,000	1,000		
tember	29	5	18	30	4	46	389,000			1,314.14
tember	1			2		2				1,404.47
Total	184	40	1	52			1,165,000	None 1,000	1,166,000	$6,648.75
Economy	179	40	1	30	5	22				
Emergency	5			22		4.4				

State of New York,
County of New York, ss:
William F. Morris being duly sworn deposes and says:
That he prepared the above statement from information obtained from the records of Staten Isla
facts contained in such statement truly and correctly reflect the information appearing on such re

Wm. F. Morr

Sworn to before me this 19th
Henry C. John
Notary Publ
King's Co. (
Certificates
Register's N
Commission

(Seal)

[fol. 1094] UNITED STATES CIRCUIT COURT OF APPEALS, THIRD CIRCUIT

In the Matter of the Application of JERSEY CENTRAL POWER & LIGHT COMPANY for a Review of an Order of the Federal Power Commission Pursuant to Section 313 of the Federal Power Act

PETITION FOR REVIEW

The petition of Jersey Central Power & Light Company respectfully alleges:

1. Petitioner is a corporation duly organized and existing under the laws of the State of New Jersey with its principal office in Asbury Park, Monmouth County, New Jersey (within the jurisdiction of this Court), and is engaged in the business of the transmission and sale of electricity and gas solely within the State of New Jersey. Petitioner seeks a review of an order of the Federal Power Commission (hereinafter called the "Commission") dated July 18, 1939 and entered in a proceeding before it wherein your petitioner and New Jersey Power & Light Company were respondents. Pursuant to statute an application for rehearing of said order entered by the Federal Power Commission was filed but was denied by that Commission by order entered September 15, 1939. Jurisdiction of this court is invoked under the provisions of Section 313 of the Federal Power Act (16 U. S. C. A., Section 825-L).

2. On June 7, 1938 the Commission entered an order reciting that it appeared to the Commission that your petitioner and New Jersey Power & Light Company were public utilities subject to the jurisdiction of the Commission and requiring the New Jersey Power & Light Company to submit [fol. 1095] certain information concerning the acquisition of 341,350 shares of the common stock of your petitioner alleged to be in violation of Section 203(a) of the Federal Power Act, all of which is more fully set forth in the copy of said order attached hereto and marked "Exhibit A."

3. On July 5, 1938 by further order of the Commission your petitioner and New Jersey Power & Light Company were made parties to an investigation by the said Commis-

sion to determine whether or not the transaction relating to the acquisition of said shares of the common stock of your petitioner was within the terms and provisions of the Federal Power Act aforesaid, and a public hearing thereon was duly fixed by the terms of said order, all of which is more particularly set forth in a copy of said order attached hereto and marked "Exhibit B."

4. Your petitioner being in doubt as to its status in said proceeding duly filed a petition to intervene therein as a party thereto, and denied that it was a public utility within the terms and provisions of the Federal Power Act, and that the Commission had any jurisdiction over your petitioner under and by virtue of the terms of said act. Said petition for intervention was duly granted, and pursuant to the order of the Commission dated July 5, 1938 hearings were held at which testimony and exhibits were introduced by the Commission and the other parties to said order.

5. On July 18, 1939, the Commission entered and served upon your petitioner a so-called "Determination by the Commission" (a copy of which is attached hereto and marked "Exhibit C"), which purports to finally determine that your petitioner owns and operates facilities for the transmission and/or sale at wholesale of electric energy in interstate commerce, and that your petitioner is a "public [fol. 1096] utility" within the meaning of the term as contained in the Federal Power Act. The said order purports to finally determine the status of your petitioner as a corporation subject to the general jurisdiction of the Federal Power Commission and by necessary implication requires your petitioner to comply with all the laws, rules and regulations applicable to persons determined to be within that status. The said "Determination" and each of the said findings of fact therein contained is erroneous, arbitrary and capricious, and made without substantial evidence to support it in the record of the proceedings had herein before the Federal Power Commission as to the following findings of fact:

Finding No. 1:

1. "* * * such transmission facilities of the above named companies are utilized for the transmission of elec-

tric energy in both directions between Mechanic Street substation and the substation of Jersey Central * * *"

2. "* * * such transmission facilities at Mechanic Street substation are connected directly and at all times with a common bus bar in the Mechanic Street substation * * *"

3. "* * * normally electric energy passes over such transmission facilities daily in both directions between the points specified * * *"

Finding No. 2:

1. "* * * that the transmission facilities described provide a direct and interconnected line for the flow of electric energy between the substation of Jersey Central Power & Light Company located adjacent to its generating plant in South Amboy and Atlantic substation of Staten Island Edison Corporation on Staten Island in the State of New York, via Mechanic Street substation, * * *"

2. "* * * such transmission facilities of Public Service Electric and Gas Company and Staten Island Edison Corporation are attached to the same common bus bar at Mechanic Street substation to which is Attached the transmission facilities of (Jersey Central and Public Service) * * *"

3. "* * * electric energy transmitted over * * * (Jersey Central facilities) to Atlantic substation, on Staten Island, in the State of New York, via Mechanic Street sub-
[fol. 1097] station, is generated in the State of New Jersey and consumed in the State of New York; that electric energy transmitted from Atlantic Street substation to * * * (Jersey Central facilities) via Mechanic Street substation, is generated in the State of New York and consumed in the State of New Jersey. * * *"

Finding No. 3:

"The transmission facilities owned and operated by Jersey Central Power & Light Company extending from its substation adjacent to its generating plant in South Amboy, New Jersey, to the south bank of the Raritan River in said State are transmission facilities utilized for the transmission of electric energy in interstate commerce, and there-

fore, Jersey Central Power & Light Company is a 'public utility' within the meaning of the Federal Power Act;"

Finding No. 5:

"The acquisition of 341,350 shares of the common capital stock of Jersey Central Power & Light Company by New Jersey Power & Light Company was the acquisition by a public utility of the securities of another public utility within the meaning of Section 203(a) of the Federal Power Act; * * *"

to the extent that said finding refers to your petitioner as "another public utility within the meaning of Section 203(a) of the Federal Power Act."

6. Petitioner further shows that the evidence before the Commission shows that its facilities for the transmission of electric energy and otherwise are situated wholly within the State of New Jersey and do not extend to nor connect with electric transmission facilities at the state line. That the facilities of your petitioner are used wholly and exclusively for the transmission and distribution of electric energy in intra-state commerce and are not used for the transmission of electric energy in interstate commerce or for the sale of such energy at wholesale in interstate commerce. In making and entering the aforesaid "Determination" despite the substantial evidence in the record which shows that your petitioner is not a "public utility" as that term is defined in the Federal Power Act, the Federal Power [fol. 1098] Commission has exceeded and unlawfully construed its jurisdiction and powers, as prescribed and limited in the terms of said Act. The aforesaid "Determination" is illegal, arbitrary, null and void because it is made in violation of the expressed terms of the Federal Power Act and of the established rules of statutory construction applicable to the terms of the Federal Power Act. Petitioner is not a "public utility" as defined by the Federal Power Act, and is not therefore subject to the jurisdiction of the Federal Power Commission.

7. Pursuant to an order of the Board of Public Utility Commissioners of the State of New Jersey dated March 11, 1938, 341,350 shares of the common stock of your petitioner was authorized to be acquired by the New Jersey Power & Light Company, and the transfer of said shares

on the books of your petitioner was duly authorized and approved pursuant to the terms and conditions set forth in said order. Petitioner in accordance therewith has caused the transfer of the ownership of said shares to be made on its books in the name of the New Jersey Power & Light Company, by reason whereof, pursuant to the laws of the state of New Jersey the said New Jersey Power & Light Company possesses all the rights of a stockholder of record to the extent of about 32% of petitioner's outstanding voting stock. Pursuant to said determination of the Commission the acquisition of such securities without first having secured the approval of the Commission is declared to be in violation of the provisions of Section 203(a) of the Federal Power Act. Your petitioner is, by reason of the said "Determination" in doubt as to its legal rights, duties, powers, and obligations with respect to the keeping of your petitioner's stock books and books of account in that the right of New Jersey Power & Light Company as a regis-
[fol. 1099] tered stockholder to vote its stock of your petitioner, and the right of your petitioner to pay dividends to New Jersey Power & Light Company may be challenged at some future time, and it may be determined that voting rights and/or dividends given over to such registered stockholder were rightfully owned and to be paid by your petitioner to other and different parties. By reason of the uncertain status of New Jersey Power & Light Company as a stockholder of your petitioner, which necessarily results from the aforesaid "Determination," your petitioner is aggrieved and injured in the conduct of its business and affairs.

8. Petitioner is aggrieved by the said findings and determinations of the Commission in that by reason thereof it is made subject to the general jurisdiction of the Commission and is thereby amenable to all the obligations of the Federal Power Act and orders, rules and regulations of the Commission heretofore adopted or promulgated affecting public utilities subject to the jurisdiction of the Commission, and also orders requiring the maintenance of prescribed system of accounts, depreciation requirements and continuing property records. Petitioner is also subject to summary and other investigations by the Commission and is required to prepare and file pursuant to Commission requirements various data and other information

of its operations and activities, and as well is subject to the regulation of its rates and the continued maintenance of its facilities found to be utilized in interstate transmission. By the terms of the Federal Power Act petitioner is limited in its free choice of directors and officers who may be also directors and officers of trust companies, banking associa- [fol. 1100] tions and banks, or other public utilities, and is subject to such general and other rules, regulations and orders as the Federal Power Act may provide or the Commission may from time to time promulgate. Petitioner is also subject to suits for injunction and restraint by the Commission and as well is also subject to fines, penalties and forfeitures in large sums of money in failing to comply with the terms of the Federal Power Act or any order or regulation of the Commission pursuant thereto.

9. Petitioner further alleges that the "Determination by the Commission" is in violation of your petitioner's constitutional rights in that the authority to regulate the transmission of electric energy and the use of the facilities related thereto, together with the other business and affairs of the petitioner, has not been delegated by Congress to the United States nor to the Federal Power Commission pursuant to the terms of Article I, Section 8, subdivision 3 of the United States Constitution, but has been specifically reserved to the State of New Jersey by the Tenth Amendment of said Constitution. Wherefore, your petitioner is deprived of its right to be free from federal regulation in the conduct of its business and affairs, and the determination of the status of your petitioner as a "public utility" is without lawful authority and deprives your petitioner of the right to carry on its business free of such regulation and jurisdiction without due process of law.

Wherefore, your petitioner respectfully prays that your Honorable Court review the "Determination by the Commission" issued July 18, 1939, against your petitioner and that said "Determination by the Commission" and its findings and rulings contained therein may be set aside in its entirety and made null and void in its effect upon your [fol. 1101] petitioner, and that your petitioner may have such other and further relief as may be just and proper in the premises.

Jersey Central Power & Light Company, by T. R. Crumley, President. Autenrieth & Wortendyke, Attorneys for and of Counsel with Petitioner.

[fol. 1102] STATE OF NEW JERSEY,
County of Essex, ss:

Thomas R. Crumley, of full age, being duly sworn according to law upon his oath deposes and says:

I am President of Jersey Central Power & Light Company, the petitioner named in the foregoing petition. I have read the same and the facts set forth therein are true to the best of my knowledge, information and belief.

Thomas R. Crumley.

Subscribed and sworn to before me this 10th day of November, 1939. Charles Silber, a Master in Chancery of New Jersey.

Note: Omitted from this print. Exhibit "A" being order to show cause issued by Federal Power Commission. Printed elsewhere in record Vol. 1, page 1. Exhibit "B" being order instituting investigation. Printed elsewhere in record Vol. 1, page 9. Exhibit "C" being Determination by the Commission. Printed elsewhere in record Vol. II, page 936.

[fol. 1103] [Stamp:] Received & Filed Nov. 10, 1939. William P. Rowland, Clerk

IN THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE THIRD CIRCUIT

In the Matter of the Application of NEW JERSEY POWER & LIGHT COMPANY, Pursuant to Section 313 of the Federal Power Act, for the Review of an Order of the Federal Power Commission

PETITION FOR REVIEW

To the Honorables, the Judges of the United States Circuit Court of Appeals for the Third Circuit:

The petition of New Jersey Power & Light Company respectfully alleges:

1. Petitioner is a corporation duly organized and existing under the laws of the State of New Jersey, with its principal

office at Dover, New Jersey, within the territorial jurisdiction of this Court; and is engaged in the business of the transmission and sale of electric energy within the State, and at the State line, of New Jersey. Petitioner is a "person" and a "public utility" as defined in the Federal Power Act. (16 U. S. C. A. Sec. 791 *et seq.*). Petitioner seeks a review of an Order of the Federal Power Commission (hereafter called the "Commission"), entered on July 18, 1939, after the termination of a proceeding before it wherein your Petitioner was the respondent. An application for the rehearing of such Order was duly made, and was denied [fol. 1104] by Order of the Commission entered September 15, 1939. Jurisdiction of this Court is invoked under the provisions of Section 313 of the Federal Power Act (16 U. S. C. A. Sec. 825 L.). A copy of the said application is attached hereto.

2. On June 7, 1938, the Commission entered and served upon your Petitioner an Order to Show Cause, requiring your Petitioner to submit in writing: "• • • detailed information concerning its reported acquisition of 341,350 shares of common stock of Jersey Central Power & Light Company in apparent violation of Section 203 (a) of the Federal Power Act"; and to show cause, if any: "• • • why this Commission should not proceed to enforce the requirements of said Act."

3. On June 24, 1938, Petitioner filed its return or answer to the said Order to Show Cause. In said return, Petitioner set forth to the said Commission the following facts, which are hereby reaffirmed and realleged:

a) On March 11, 1938, the Board of Public Utility Commissioners of the State of New Jersey, acting pursuant to the statutes of such State, duly authorized Petitioner to acquire 341,350 shares of the common stock of Jersey Central Power & Light Company. (A copy of the Decision of said Board, granting such authority, is annexed hereto and marked Exhibit "A".)

b) On March 14, 1938, Petitioner acquired and took full title to such shares, after having fully complied with the terms and conditions of the Decision of said Board.

c) Jersey Central Power & Light Company, whose shares were so acquired, does not own or operate any facilities for

the transmission of electric energy in interstate commerce, nor for the sale of such energy at wholesale in interstate commerce, nor any facilities of any kind subject to the jurisdiction of the Federal Power Commission; such Company [fol. 1105] is, therefore, not a "public utility" within the special definition of that term as contained in the Federal Power Act, and as referred to in Section 203 (a) of the Act. There is no provision in Section 203 (a) of the Act, or elsewhere, which gives the Commission jurisdiction over the aforesaid acquisition; or which requires your Petitioner to obtain the approval of the Federal Power Commission before acquiring the stock of Jersey Central Power & Light Company; or which made it unlawful for your Petitioner to acquire such stock on March 14, 1938.

4. On July 5, 1938, the Commission entered and served upon your Petitioner a so-called "Order Instituting Investigation and Setting Date of Hearing", constraining your Petitioner to attend a public hearing on the question therein propounded, whether or not the acquisition by your respondent on March 14, 1938, of 341,350 shares of stock of Jersey Central Power & Light Company:

"• • • involved the purchase, acquisition, or taking by a public utility of any security of another public utility within the meaning of Section 203 (a) of the Federal Power Act • • •"

Pursuant to this order, formal public hearings were had before an examiner of the Commission, commencing September 27, 1938, and adjourned *sine die* October 10, 1938, wherein testimony was taken on the said issue.

5. On July 18, 1939, the Commission entered and served upon your Petitioner a so-called "Determination by the Commission" wherein the Commission found, *inter alia*, that:

"The acquisition of 341,350 shares of the common capital stock of Jersey Central Power & Light Company by New Jersey Power & Light Company was the acquisition by a public utility of the securities of another public utility within the meaning of Section 203 (a) of the Federal Power Act; that New Jersey Power & Light Company, having acquired such securities without first having secured an order of the Commission authorizing it to do so, has

acquired such securities in violation of the expressed provisions of Section 203 (a) of the Federal Power Act."

[fol. 1106] (A copy of said "Determination by the Commission" is annexed hereto and marked Exhibit "B").

6. The jurisdiction and powers of the Federal Power Commission are prescribed and limited by the Federal Power Act. In bringing and conducting the aforesaid proceeding, and in making the "Determination" herein complained of against your Petitioner, the Commission purports to be acting pursuant to the terms of Part II thereof, entitled "Regulation of Electric Utility Companies Engaged in Interstate Commerce". (16 U. S. C. A. Section 824 *et seq.*) Section 203 (a) of said Part II of said Act provides, in pertinent part:

"No public utility shall sell, lease, or otherwise dispose of the whole of its facilities subject to the jurisdiction of the Commission, or any part thereof of value in excess of $50,000, or by any means whatsoever, directly or indirectly, merge or consolidate such facilities or any part thereof, with those of any other person, or purchase, acquire, or take, any security of any other public utility, without first having secured an order of the Commission authorizing it to do so. * * *"

Section 201 (e) of the said Part II provides:

"The term 'public utility' when used in this Part or in the Part III means any person who owns or operates facilities subject to the jurisdiction of the Commission under this Part."

The uncontradicted and uncontroverted evidence in the record of the proceedings had herein before the Federal Power Commission, and especially the testimony of Messrs. Crumley, Sibley and Lytle, on the formal hearings, establishes the fact that Jersey Central Power & Light Company is not a person who owns or operates facilities subject to the jurisdiction of the Commission under said Part II. Such facilities are there shown to be located entirely within [fol. 1107] the State of New Jersey, and are shown not to extend to, or connect with other facilities at, the State line. It is shown that such facilities are not used for the transmission of electric energy in interstate commerce, or

for the sale of such energy at wholesale in interstate commerce. It is shown that Jersey Central Power & Light Company does not transmit any electric energy for the purpose of ultimate consumption in another State. It is shown that the facilities of this Company are used only for the generation of electric energy, and its local transmission, distribution and sale entirely within the State of New Jersey. There is no substantial evidence that Jersey Central Power & Light Company is a "public utility", as that term is defined in the Federal Power Act. There is no substantial evidence that the Commission has jurisdiction to pass on the aforesaid acquisition by your Petitioner of 341,350 shares of stock of Jersey Central Power & Light Company. In view of the substantial and material evidence in the record, the Commission has exceeded, and unlawfully construed, its jurisdiction as prescribed and limited by the terms of the Federal Power Act in making and entering the finding recited in paragraph "5" hereof.

7. There is no substantial evidence in the record of the proceedings had before the Federal Power Commission to support the findings contained in the "Determination by the Commission"; and said findings of fact are contrary to the evidence, and arbitrary and capricious, in the following particulars, *inter alia:*

[fol. 1108] A. The following portions of finding number (1) concerning the connecting transmission facilities of Jersey Central Power & Light Company (hereinafter called "Jersey Central") and Public Service Electric and Gas Company (hereinafter called "Public Service"), located between South Amboy and Perth Amboy in the State of New Jersey, are erroneous, and made without substantial evidence:

1. "* * * such transmission facilities of the above named companies are utilized for the transmission of electric energy in both directions between Mechanic Street substation and the substation of Jersey Central * * *."

The record contains no evidence contradicting the testimony of witness Crumley, who actually operates the Jersey Central property, and of witness Sibley, who investigated the operations of both companies, that the transmission facilities of Jersey Central at South Amboy, extending to the Raritan River, are utilized solely for the transmitting

of electric energy to the Raritan River where such facilities connect with the transmission facilities of Public Service, and are not utilized by Jersey Central for the transmission of said energy to Mechanic Street substation of Public Service, contrary to the implication of said finding. Uncontroverted testimony clearly shows that the said transmission facilities of Jersey Central are not used or utilized by Jersey Central for the receipt of commercial energy from said Public Service except for rare emergency occasions; and that instant flashes of energy received by Jersey Central over the said facilities are of a casual and accidental character, having no commercial significance, and are immaterial to the business of the company, or the matters at issue in this proceeding.

2. "• • • such transmission facilities at Mechanic Street substation are connected directly and at all times with a common bus bar in the Mechanic Street substation. • • •"

The bus bar in the Mechanic Street substation of Public Service Electric & Gas Company is shown by uncontroverted testimony to be a facility owned and operated by, and under the sole and exclusive control of, said Public Service, and is shown not to be a facility "common" to Public Service and Jersey Central; and no transmission facilities of Jersey Central are connected with such bus bar; contrary to the implication contained in said finding. [fol. 1109] 3. "• • • normally electric energy passes over such transmission facilities daily in both directions between the points specified • • •"

The testimony of the above witnesses shows that energy is not "normally" transferred daily from said Public Service to Jersey Central, but that transfers in this direction are of unusual and instantaneous character.

B. The following portions of finding number (2) concerning the said facilities of Jersey Central and Public Service, and the certain separate and distinct connecting transmission facilities of Public Service and Staten Island Edison Corporation, are erroneous, and made without substantial evidence:

1. "• • • the transmission facilities described provide a direct and interconnected line for the flow of electric

energy between the substation of Jersey Central Power & Light Company located adjacent to its generating plant in South Amboy and Atlantic substation of Staten Island Edison Corporation on Staten Island in the State of New York, via Mechanic Street substation, * * *"

Witnesses Crumley, Sibley and Lytle have demonstrated, without controversy, that the flow of electric energy between the interconnecting facilities of Jersey Central and Public Service is a flow unconnected and unrelated in any commercial or business sense with any flow of power which may occur on the interconnecting facilities of said Public Service and Staten Island Edison Corporation, and the record shows that there is no direct line for the flow of electric energy between any facilities of Jersey Central and any facilities of Staten Island Edison Corporation; contrary to the above recited portion of finding number (2), and other similar recitals in said finding.

2. "* * * such transmission facilities of Public Service Electric and Gas Company and Staten Island Edison Corporation are attached to the same common bus bar at Mechanic Street substation to which is attached the transmission facilities of (Jersey Central and Public Service) * * *"

The said bus bar is, as above pointed out, shown to be a Public Service facility, and connected only to Public Service transmission facilities, not "common" to Public Service and Jersey Central and Staten Island Edison Corporation; all contrary to the terms of such portion of said finding number (2).

3. "* * * electric energy transmitted over * * * (Jersey Central facilities) to Atlantic substation, on Staten Island, in the State of New York, via Mechanic Street substation, is generated in the State of New Jersey and consumed in the State of New York; that electric energy transmitted from Atlantic Street substation to * * * (Jersey [fol. 1110] Central facilities) via Mechanic Street substation, is generated in the State of New York and consumed in the State of New Jersey * * *"

The evidence in this proceeding shows that there is no routing or sending of energy between Jersey Central and Staten Island Edison Corporation "via" facilities of Public Service. Such evidence rebuts the inference contained

in the above findings that any consumption of Staten Island energy by Jersey Central, or any consumption of Jersey Central energy by Staten Island, is a matter of ordinary or usual course, or is a result of volition or desire, or intent of the parties concerned, or is material to the matters in issue in this proceeding or is of other than strictly academic and scientific interest. The relevant evidence in this proceeding demonstrates that electric energy transmitted over facilities of Jersey Central, at the place in question, is transmitted to and received from, Public Service Electric & Gas Company—delivery being taken by both companies at a point within the State of New Jersey.

C. Finding number (3) is erroneous in its entirety and made without substantial evidence. In contradiction of the text thereof:

There is no evidence whatsoever in this proceeding that the transmission facilities owned and operated by Jersey Central at the place in question, are utilized by the said company or by any other person for the transmission of electric energy in interstate commerce, and the uncontradicted testimony of witnesses testifying as to the business done by Jersey Central thereover, demonstrates that such facilities are utilized only for the transmission of electric energy between Jersey Central and Public Service Electric & Gas Company within the State of New Jersey; and as a matter in intrastate local traffic or commerce between the said companies. That portion of finding number (3) to the effect that Jersey Central is a "public utility" within the meaning of the Federal Power Act, is in direct contradiction to the testimony of witnesses familiar with the facts as to the business done by said company.

D. Finding number (5) is erroneous in its entirety, and made without substantial evidence. In contradiction of the text thereof:

There is no evidence in the proceedings had herein before the Federal Power Commission, that Jersey Central Power & Light Company is a "public utility" within the meaning of Section 203(a) of the Federal Power Act, and the facts brought out in the record herein demonstrate that such company is not a "public utility" within such meaning. There is, therefore, no evidence that New Jersey Power & Light Company, in acquiring 341,350 shares of [fol. 1111] the common capital stock of Jersey Central

Power & Light Company, has violated the provisions of said Section 203(a) of the Federal Power Act.

8. In making the aforesaid "Determination by the Commission," the Federal Power Commission has failed and refused to follow the controlling legal principles and decisions of the United States Supreme Court in construing the term "interstate commerce"; and has exceeded or unlawfully construed the terms of the Federal Power Act. Said "Determination" is illegal, arbitrary, null and void because it is made in violation of the express terms, and intent of the Federal Power Act, and of the established rules of statutory construction applicable thereto.

9. The business, commerce and affairs of Jersey Central Power & Light Company are exclusively and entirely carried on by it within the State of New Jersey. The power to regulate such business, commerce and affairs, has not been delegated to the United States or the Congress thereof under the terms of Article One, Section 8, Subdivision 3, of the Constitution; but has been specifically reserved to the State of New Jersey by Amendment X of the said Constitution. In assuming to fix, by the "Determination" here complained of, the status of Jersey Central Power & Light Company as a Company subject to the jurisdiction of the Federal Power Commission, and in assuming to assert jurisdiction over the acquisition by your Petitioner of the stock of this Company, the said Commission has invaded rights, powers, and jurisdiction specifically reserved to the State of New Jersey and its duly constituted authorities; and has deprived your Petitioner of its right to be free of Federal regulation in respect of the said acquisition, and has deprived your Petitioner of its property, without due process of law.

[fol. 1112] 10. In making the aforesaid "Determination", the Federal Power Commission has adversely affected and cast doubts upon the title of your Petitioner to, and the right of your Petitioner to keep and hold, the stock of Jersey Central Power & Light Company, which said stock was acquired by your Petitioner on March 14, 1938. The aforesaid "Determination" places your Petitioner in jeopardy of the imposition of excessive fines and penalties which the Commission may purport to assess under the terms of Sections 315 and 316, of the Federal Power Act (16 U. S. C. A.

Sections 825 (n)-(o)); and purports to finally determine the status of your Petitioner as a corporation which has violated the express terms of the Federal Power Act, and deprives your Petitioner of its property and rights without due process of law.

Wherefore, for the reasons hereinabove set forth, your Petitioner respectfully prays:

a) That your Honorable Court review the "Determination by the Commission", issued by the Commission July 18, 1939, against your Petitioner;

b) That upon review of the said "Determination" your Honorable Court set aside and annul the said "Determination" and find that your Petitioner has not violated the terms of the Federal Power Act in the acquisition of shares of stock of Jersey Central Power & Light Company, as above set out;

c) That your Honorable Court grant such other and further relief as may be just and proper in the premises.

New Jersey Power & Light Company, by A. E. Ward.

Travis, Brownback & Paxson, 61 Broadway, New York, N. Y., Attorneys for Petitioner.

[fol. 1113] State of New York,
County of New York, ss.:

A. E. Ward, being duly sworn, deposes and says: That he is a Vice-President of New Jersey Power & Light Company, the petitioner within named; that he has read the foregoing petition and knows the contents thereof; that the same is true to the best of his knowledge, information and belief.

A. E. Ward.

Sworn to before me this 9th day of November, 1939. (Sgd.) William J. Horrigan, Notary Public, Kings County. Kings Co. Clk's No. 559, Reg. No. 1279. N. Y. Co. Clk's No. 3, Reg. No. 1H584. (Seal.) Commission expires March 30, 1941.

Note.—Omitted from this print. (Exhibit "B", being Determination by the Commission. Printed elsewhere in record Vol. II, page 936. Also application for rehearing by

New Jersey Power & Light Company. Printed elsewhere in record Vol. II, page 941.

[fol. 1114] EXHIBIT A

STATE OF NEW JERSEY

Board of Public Utility Commissioners

In the Matter of the Application of THE NEW JERSEY POWER & LIGHT COMPANY for Approval of the Exchange of Certain of Its Investments for Other Securities

DECISION

Wall, Haight, Carey & Hartpense, by Edward J. O'Mara and William F. Morris, for the Petitioner

The petition of the New Jersey Power & Light Company seeks the Board's approval of the exchange of 53,850 shares of $6.00 Cumulative Preferred Stock of Metropolitan Edison Company, a Pennsylvania corporation, for 341,350 shares of Common Stock of Jersey Central Power & Light Company, a New Jersey corporation.

Upon the hearing of the application it appeared (1) that the market value of the $6.00 Cumulative Preferred Stock of Metropolitan Edison Company was of an estimated value of $4,312,308.00 and (2) that there is no current market price quoted on the Common Stock of the Jersey Central Power & Light Company and (3) that 712,411 shares of the Common Stock of Jersey Central Power & Light Company are pledged to secure $20,000,000.00 principal amount of debentures of National Public Service Corporation, which debentures have a current market value of 45 per cent, of par or an aggregate market value of $9,000,000.00 which is [fol. 1115] equivalent to $12.63 per share for the Common Stock of the Jersey Central Power & Light Company pledged as collateral for said debentures, and that, based on that value, 341,350 shares of Common Stock of Jersey Central Power & Light Company would have a value of $4,312,308.00.

And it further appeared that the said $20,000,000.00 principal amount of the National Public Service Corporation

debentures are the subject of litigation presently pending before the Courts in the State of New York.

And it now appearing that, in view of the absence of definite proof of the value of the shares of the Common Stock of the Jersey Central Power & Light Company, it would not be in the public interest to approve the proposed exchange of securities unless adequate security is pledged by escrow to insure to the New Jersey Power & Light Company the equivalent of the full value of the said $6.00 Cumulative Preferred Stock of the Metropolitan Edison Company, in the event that the sale of the Common Stock of the Jersey Central Power & Light Company pledged as collateral for the debentures of National Public Service Corporation as aforesaid does not result in a price of $12.63 per share for said Common Stock. In such event recourse should then be had to additional securities as aforesaid in an amount sufficient to equal $4,312,308.00.

The Board hereby approves the exchange of 53,850 shares of $6.00 Cumulative Preferred Stock of Metropolitan Edison Company for 341,350 shares of the Common Stock of Jersey Central Power & Light Company and approves the transfer to the petitioner of said common stock [fol. 1116] on the books of the Jersey Central Power & Light Company upon the following conditions:

1. That the applicant will pledge in escrow with any bank or trust company of the State of New Jersey authorized to act as an escrow agent or representative under an escrow agreement to be approved by the Board, $1,000,000.00 principal amount of the Mohawk Valley Company 6% Consolidated Refunding Gold Bonds due November 1, 1981, and $1,000,000.00 principal amount of the Mohawk Valley Company 6% Consolidated Refunding Gold Bonds due November 1, 1991. In the event that the Common Stock of the Jersey Central Power & Light Company brings less than $12.63 per share at judicial sale, then the securities pledged under this provision shall be used to answer and satisfy the amount by which the value of 341,350 shares of common stock of Jersey Central Power & Light Company at said sale price is less than $4,312,308.00.

2. That this approval does not extend to the value of the property or to the accounts of any of the companies involved in this transaction, and further

3. That any entries made on the books of the applicant company shall be identified so as to permit of ready analysis.

4. That said exchange is approved without prejudice to the authority of the Board or the State with respect to rates, valuations, services or any other matter whatsoever in any future proceedings.

[fol. 1116] 5. That the applicant company shall file with the Board within ten days from the date hereof an escrow agreement in accordance with condition (1) above, which shall be satisfactory to the Board.

6. That the applicant company shall file with the Board within ten days from the date hereof its unqualified acceptance of the conditions herein stated; otherwise the approval herein granted shall be null and void.

Dated, March 11, 1938.

Board of Public Utility Commissioners, by (Signed) Thomas L. Hanson, Commissioner; (Signed) Frank J. Reardon, Commissioner. (Seal.) Attest: (Signed) Emmett T. Drew, Secretary.

[fol. 1118] IN THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE THIRD CIRCUIT—October Term, 1939

No. 7256

JERSEY CENTRAL POWER & LIGHT COMPANY, Petitioner,

vs.

FEDERAL POWER COMMISSION, Respondent

No. 7257

NEW JERSEY POWER & LIGHT COMPANY, Petitioner,

vs.

FEDERAL POWER COMMISSION, Respondent

And afterwards, to wit, 17th day of December, 1941, come the parties aforesaid by their counsel aforesaid, and this case being called for argument sur pleadings and

briefs, before the Honorable John Biggs, Jr., Honorable Albert B. Maris and Honorable Herbert F. Goodrich, Circuit Judges, and the Court not being fully advised in the premises, takes further time for the consideration thereof,

And afterwards, to wit, on the 25th day of May, 1942, come the parties aforesaid by their counsel aforesaid, and the Court, now being fully advised in the premises, renders the following decision:

[fol. 1119] IN THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE THIRD CIRCUIT, OCTOBER TERM, 1939

No. 7256

JERSEY CENTRAL POWER & LIGHT COMPANY, Petitioner,

v.

FEDERAL POWER COMMISSION, Respondent

No. 7257

NEW JERSEY POWER & LIGHT COMPANY, Petitioner,

v.

FEDERAL POWER COMMISSION, Respondent

On Petitions for Review from an Order of the Federal Power Commission

OPINION—Filed May 25, 1942

Before Biggs, Maris and Goodrich, Circuit Judges

BIGGS, *Circuit Judge:*

[fol. 1120] Questions Involved

The petitioners in the cases at bar, Jersey Central Power and Light Company and New Jersey Power and Light Company, seek review of an order of the Federal Power Commission entered July 18, 1939 pursuant to the Federal Power Act (16 U. S. C. A. Sec. 791 et seq.). The first question presented for our determination is whether this court has jurisdiction of the petitions by virtue of Section 313(b) of the Federal Power Act (16 U. S. C. A. Sec. 825 1(b)). The second question is whether the "Determina-

tion of the Commission" can be sustained on its merits. The facts are as follows:

Facts

On June 7, 1938 the Commission entered an order pursuant to the provisions of Section 301(b), Part III of the Federal Power Act (16 U. S. C. A. Sec. 825 1(b)), directing the petitioner, Jersey Power, to submit information concerning the acquisition by it of 341,350 shares of the common stock of the petitioner, Jersey Central, without the authorization of the Commission and allegedly in violation of Section 203(a) of the Act (16 U. S. C. A. Sec. 824b(a)). This section provides that no public utility within the purview of the Act shall purchase or acquire any security of any other public utility within the purview of the Act without having first secured an order of the Commission authorizing it to do so. Jersey Power, admitting that it was a public utility within the meaning of Section 201(e) of the Act (16 U. S. C. A. 824(e)), filed an answer to the Commission's order admitting that it had acquired the stock of Jersey Central but denying that the provisions of Section 203(a) were applicable to the transaction for the asserted reason that Jersey Central was not a public utility within the meaning of the Act. Jersey Central sought intervention, was made a party to the proceedings, and asserted the same defense. After hearing, the Commission found that Jersey Central was a public utility within the meaning of the Act and that Jersey Power had acquired the securities in violation of Section 203(a). The Commis- [fol. 1121] sion issued its findings on July 18, 1939. Petitions for rehearing timely filed by both Jersey Central and Jersey Power were denied by the Commission on September 15, 1939. Review of the Commission's determination was then sought in this court.

Both Jersey Central and Jersey Power own and operate public utility systems in New Jersey. The petitioners and another electric public utility corporation, Public Service Electric and Gas Company, serve territories which comprise about two-thirds of the area of the State of New Jersey. Jersey Power's territory lies in the Western part of the State and is bounded roughly upon the west by the line of the Delaware River and the western boundary of New Jersey. To the south Jersey Power's territory

moves down with the line of the river to territory contiguous with that served by the Philadelphia Electric Company and its subsidiaries in Pennsylvania.

Jersey Central for its part serves two non-contiguous areas in New Jersey. One lies to the north adjacent to and east of the territory of Jersey Power and contiguous to the area served by Public Service on the east. Jersey Central has another area of service to the south and east of the territory of Public Service just mentioned. The latter area of Jersey Central runs from the Atlantic coast back to and contiguous with territory served by Public Service. It is with this area of service of Jersey Central with which we are most concerned in the cases at bar. Beginning at a point near Barnegat on the Atlantic coast, Jersey Central's lines run north through the New Jersey seaside resorts to South Amboy. Further to the west in central New Jersey other lines of Jersey Central supply electricity to New Lisbon and villages and towns to the north of it. These western lines connect with the eastern system at South Amboy.

From South Amboy a main connecting line runs across the territory of Public Service into the northern area served by Jersey Central. There is a large generating plant at South Amboy which is connected with a substation main- [fol. 1122] tained by Public Service at Perth Amboy on the opposite side of the Raritan River. This substation is known as the Mechanic Street Substation and what goes on there furnishes many of the basic facts giving rise to the controversy at bar.

The line which connects Jersey Central's generating plant at South Amboy with the Mechanic Street Substation is a little over two miles long. Jersey Central owns about seven-eighths of a mile of the connecting line, that portion of it which runs from Jersey Central's generating plant to the south bank of the Raritan River. At that point a submarine cable, owned by Public Service, takes the current under the Raritan River. Emerging from the river the current is taken by an overhead line owned by Public Service for a distance of about a mile and a fifth to the Mechanic Street Substation owned by Public Service. The connecting line comes into the Mechanic Street Substation through metering equipment and switches and is connected with a "bus-bar". There are a number of connections to

the bus. Two are to the plant of the General Cable Corporation, a customer of Public Service. Two are connections with Metuchen, New Jersey. Another connection leads to the town of Keasby in that state. An additional connection runs to Public Service's substation at Carteret, New Jersey. There is also, and this is of particular importance, a tap with metering equipment and an air break switch connected to a line of Staten Island Edison Corporation which serves Staten Island, New York.

At this point it becomes necessary to endeavor to describe three "types" of electricity which flow through the Public Service bus-bar at the Mechanic Street Substation. These three "types" of power are designated as "emergency", "economy-flow" and "incidental" or "slop-over" power. The petitioners take the point of view that we are concerned particularly with the last two kinds of electrical energy. But the fact is that electricity is energy no matter what you call it and the "types" of electrical energy involved in the cases at bar, as the petitioners use that word, refer [fol. 1123] really to the kind of contractual relations between Jersey Central and Public Service on the one hand and Public Service and the Staten Island Company on the other, pursuant to which current comes to or from Public Service's bus-bar at the Mechanic Street Substation.

"Emergency" power is simply electricity supplied by one power company to another when the latter needs additional electrical energy to take care of an emergency. The cost of emergency power is higher than that of the other types of power. The cost of and conditions for supplying emergency power between Public Service and Jersey Central are governed by a contract executed by the two companies and dated March 24, 1931.

The contract of March 24, 1931 provides that if the interconnecting facilities of the two companies are made available for power other than emergency power, the use of the connections should be made available by agreement between the companies. Accordingly Jersey Central and Public Service arrived at an oral agreement for an interchange of "economy-flow" electricity. Economy-flow electricity may be described as energy generated and supplied by one company to another when the receiving company has enough generating facilities to generate that electricity for itself but elects to receive it from another company because that company can generate and deliver it to the point where it is

needed more cheaply than the purchasing corporation. Economy-flow power is supplied to Public Service by Jersey Central upon a day-to-day basis and the price is calculated by a formula which consists in taking half of the cost of the electricity to the generating company and adding to that figure half of what the cost would have been if the purchasing company had generated the electricity.

Public Service receives economy-flow current almost daily from Jersey Central but it should be noted that Jersey Central's net receipts from the sale of economy-flow current for the year 1937 were about $10,000 while its net income from all the electricity sold by it during the same period [fol. 1124] amounted to $4,170,585. Jersey Central in fact is principally engaged in the retail sale of electricity to numerous individual customers in its territory. We shall deal with the electricity supplied by Jersey Central to Public Service in terms of kilowatt-hours at a later point in this opinion.

We think that "slop-over" or "incidental" current is well described upon the brief of the petitioner, Jersey Power, as "* * * an electrical phenomenon which consists in an instantaneous, involuntary ebb and flow where there is a physical connection, otherwise unused, between two systems. Where such an unused connection exists the two systems are normally 'in balance.' When there is a sudden demand for more energy made on one of the systems, its generators are speeded up to meet the demand. There is a tendency, however, for the system on which the sudden demand is made, to draw on the system with which it is connected for the instantaneous period between the demand and the compensating generating speed-up, * * *" Since the systems of Jersey Central, Jersey Power and Public Service are interconnected and are synchronized,[1]

[1] Synchronization consists in running the generators upon interconnected systems at the same rate of speed. One or more generators at strategic points upon the connected systems set the pace like metronomes running in unison. It appears from the record in the cases at bar that the metronome generators which set the pace for the interconnected alternating current power systems which we are discussing are operated on the systems of other interconnected public utility systems in Pennsylvania and New York. The Staten Island Company is in turn a part of and connected with

not only with each other but also with other electrical transmission systems covering the southern part of New Jersey, the southeastern part of Pennsylvania, the northeastern part of Maryland, Delaware and with the Staten Island Company, "spinning" reserve is maintained by Jersey Central, Jersey Power and Public Service. Additional spinning reserve is procurable from interconnected public utilities in Pennsylvania and New York. Spinning reserve [fol. 1125] consists of spinning dynamos, whose current may be thrown on the circuits in case of necessity. Since these various electric utilities systems are interconnected, it is obvious that there will be some incidental or slop-over current passing through the various system connections including the bus-bar at the Mechanic Street Substation which comprise the connections between Jersey Central and Public Service on the one hand and Public Service and the Staten Island Company on the other.

According to an exhibit introduced in evidence by the Commission the amount of economy-flow current received by Public Service from Jersey Central in 1937 and in the first three months of 1938 far exceeded the current in that category gotten by Jersey Central from Public Service. This power was metered at South Amboy and passed through the bus-bar of the Mechanic Street substation. In 1937, 55,421,000 KWH of electricity were delivered by Jersey Central to Public Service against 315,600 KWH received by Jersey Central from Public Service. For the first three months of 1938 Jersey Central delivered to Public Service 10,140,000 KWH against 87,400 KWH received by Jersey Central from Public Service. In 1936 Public Service received from Jersey Central 70,694,825 KWH against 1,400,720 KWH delivered by Public Service to Jersey Central. In 1935 the KWH delivered by the two companies to each other were comparable to the amounts delivered in 1936 and in 1934 the figures were comparable to those of 1937.

The meters at the Mechanic Street Substation were read at half hour intervals from 6 A. M. until midnight and at

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one of these systems. Though much emphasis is laid by some of the Commission's witnesse. on the phenomenon of synchronization, it does not possess significance under the facts of the appeals at bar except to the extent indicated in the opinion.

hour intervals from midnight to 6 A. M. These readings were recorded regularly on log sheets kept by the station employees. From January 1, 1937 to September 6, 1938, 25,500 readings were made and recorded in the log. 184 readings, which the Commission found representative, were selected from the 25,500 readings and analyzed further by the Commission's experts. These show that as electricity flowed from Jersey Central to the Mechanic Street Substation, current flowed out from the bus-bar to [fol. 1126] the Staten Island Company. The 184 readings demonstrated that the electricity transmitted by Jersey Central to Public Service exceeded the local requirements for electricity from the bus-bar. 24 of the 184 readings were subjected to further analyses by the Commission in an attempt to determine the percentage of electricity supplied to the Staten Island Company originating in the Jersey Central system. The Commission found that these readings demonstrated that electricity was flowing out of all of the bus-bar connections except the connection with Jersey Central where current was flowing in. As a consequence the Commission found there was no electricity coming in to the bus-bar on these occasions except from Jersey Central. As to five periods examined it appeared that the flow of electricity to Public Service on the bus-bar from Jersey Central exceeded the requirements of the Central Division of Public Service, the load required to maintain the Staten Island Company and all local requirements of the substation.

The petitioners take exception to the conclusions drawn from the readings by the Commission's experts. They say that you can't earmark a kilowatt. This saying is as true as a statement that running water cannot be earmarked. But if water is put into a reservoir which is connected with pipes which cross state lines, some of the water will cross state lines and enter into interstate commerce if it be the subject of commercial transactions. The analogy between water and electricity is illustrative of the facts in the case at bar. The Commission was justified in finding as a fact that some of the electricity generated by Jersey Central at its South Amboy plant reached Staten Island.

Operators of the Staten Island Company stationed at the Staten Island end of the submarine cable running from the bus-bar under the Arthur Kill and operators of Public

Service on the New Jersey side of that estuary watched meters which registered the flow of current passing between the two companies and could and did cut the flow of electricity between them from time to time. The petitioners [fol. 1127] contend that much of the electricity which passed through the connection was slop-over or incidental current, that such flow was accidental and unintentional and should be disregarded as not in fact constituting interstate commerce. But on at least six occasions between August, 1935 and March, 1938 emergency current was metered through the cable from Public Service to Staten Island. Economy-flow current passed with some frequency between Public Service and the Staten Island Company. Between August 26, 1935 and December 31, 1935 the Staten Island Company got economy-flow current from Public Service at least ten times and received approximately 51,800 KWH from such flow. In 1936 the Staten Island Company received economy-flow current from Public Service thirty-seven times and got over 329,600 KWH therefrom. As an exhibit introduced by Jersey Power before the Commission shows, from the end of August, 1935 until the middle of March, 1938, leaving incidental flow out of the calculation but including emergency current therein, the Staten Island Company received 403,125 KWH from Public Service for which it paid over $3,300.

The amount of incidental flow current between Public Service and the Staten Island Company from the end of August, 1935 to the middle of March, 1938 is shown by another exhibit introduced into evidence by Jersey Power. It appears that from August 26 to December 31, 1935 the Staten Island Company delivered to Public Service 1,125,000 KWH of electrical energy and received from Public Service in the same period 1,013,900 KWH, leaving an excess of deliveries from Staten Island to Public Service of 111,100 KWH. Transmission figures of KWH for 1936, 1937 and 1938 are comparable and show that throughout the period designated, the Staten Island Company delivered more incidental flow current to Public Service than it received from that company. But the emergency and economy-flow current which the Staten Island Company received from Public Service was much greater than the amount of incidental flow current which went from the Staten Island Company to Public Service. Subtracting the value of the incidental flow

[fol. 1128] current delivered by Staten Island to Public Service from the emergency and economy-flow current delivered by Public Service to Staten Island we arrive at the balance of 52,100 KWH in favor of the Staten Island Company for which that company paid Public Service over $2,400.

How much of the electricity which flowed from Public Service to the Staten Island Company originated in Jersey Central's South Amboy generators and passed over the connecting line from South Amboy to the Machanic Street Substation and thence through the bus-bar to the Staten Island Company no one can say. It is certain that some did go to the Staten Island Company. Measured in terms of the KWH generated and transmitted by large electric public utility systems it was small.

There are details of the picture which we have omitted but what we have said presents with reasonable accuracy the situation between Jersey Central and Public Service on the one hand and Public Service and the Staten Island Company on the other.

The Commission bases its entire case upon the transmission of electricity by Jersey Central over the connecting line to Public Service and the fact that some part of this current reached the Staten Island Company.

THE LAW

Jurisdiction to Review the Determination by the Commission

A preliminary question must be disposed of. The petitioners assert that this court has jurisdiction to review the "Determination by the Commission" which found Jersey Central and Jersey Power to be public utilities within the meaning of Part II of the Federal Power Act. The Determination by the Commission was followed by its order denying petitions for rehearing. The denial of such petitions is a prerequisite to the review prescribed by the Act in courts of appeals. See Section 313 of the Act (16 U. S. C. A. Sec. [fol. 1129] 825 l) which provides that any party to a proceeding under the Act aggrieved by "an order" issued by the Commission may obtain a review of such order in a circuit court upon the denial of rehearing by the Commission. The question which we must determine is whether the "Determination by the Commission" has the status

of a reviewable order within the purview of Section 313(b) of the Act (16 U. S. C. A. Sec. 825 l (b)).

There can be no doubt that the effect of the Commission's determination is to establish Jersey Central's status as a public utility within the meaning of Section 201 of the Federal Power Act (16 U. S. C. A. Sec. 824). If the determination by the Commission that Jersey Central is a public utility stands, the sale of the stock of Jersey Central to Jersey Power became subject to the provisions of Section 203 (a) of the Act. But more than this, if the determination is affirmed, all the provisions of Parts II and III of the Act become applicable to Jersey Central. Some of the prohibitions and commands imposed by the statute upon a corporation with the status of a public utility within Section 201 of the Act are set out in the margin. These may be felt to be burdensome and onerous but Congress has determined them to be necessary for the regulation of electric public utilities engaged in interstate commerce.[2]

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[2] A public utility may not sell, lease or otherwise dispose of its facilities without the approval of the Commission, Section 203(a) (16 U. S. C. A. Sec. 824b(a))

May not establish rates and charges without the approval of the Commission, Section 206(a) (16 U. S. C. A. Sec. 824(e)(a)):

May be required to render more efficient service by the Commission, Section 207 (16 U. S. C. A. Sec. 824f):

Must file upon the request of the Commission inventories, statement of original cost, and inform the Commission as to all additions, extensions and new construction, Section 208(b) (16 U. S. C. A. Sec. 824g(b)):

Must keep its accounts according to regulations prescribed by the Commission, Section 301(a) (16 U. S. C. A. Sec. 825(a)):

Must furnish to the Commission any information in respect to its accounts and records, maps, contracts and reports which the Commission may require, Section 301(b) (16 U. S. C. A. Sec. 825(b)):

Its rates of depreciation may be fixed by the Commission, Section 302 (16 U. S. C. A. Sec. 825a):

Must file annual and periodic special reports as required by the rules or orders of the Commission, Section 304 (16 U. S. C. A. Sec. 825c):

Must not have as directors any officer or director of a bank,

[fol. 1130] While the rules which we must follow in determining whether the Commission's determination may be reviewed by this court are not set out specifically in the decision of the Supreme Court in Rochester Telephone Corporation v. United States, 307 U. S. 125, none the less the case indicates what our conclusion should be. In the Rochester case the Supreme Court was dealing with an appeal under Section 238 of the Judicial Code as amended (23 U. S. C. A. Sec. 345) from a final decree by a district court of three judges under the Urgent Deficiencies Act of October 22, 1913 (28 U. S. C. A. Secs. 45, 47a) as extended by Section 402(a) of the Federal Communications Act (47 U. S. C. A. Sec. 402(a)), dismissing on the merits a bill to review an order of the Federal Communications Commission.

The Federal Communications Commission had ruled that the Rochester Telephone Corporation owed obedience to certain orders issued by the Commission. Those orders required all telephone carriers subject to the Federal Com- [fol. 1131] munications Act to file schedules of their charges, copies of their contracts with other telephone carriers and other information. The Rochester Telephone Company not responding to the orders, a Division of the Commission

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trust company, banking association, or firm authorized to underwrite securities of a public utility or an officer or director of an electrical equipment company supplying electrical equipment to such public utility, Section 305(b) (16 U. S. C. A. Sec. 825d(b)):

Must pay penalties fixed by the Commission not to exceed $1,000 for wilful failure to comply with any order or to respond to any subpoena, issued under the Act, Section 315 (16 U. S. C. A. Sec. 825n):

For any wilful or knowing act of commission or omission in violation of any of the terms of the Act any person may be punished by a fine not exceeding $5000 or imprisonment for not more than two years or both, Section 316(a) (16 U. S. C. A. Sec. 825o(a)):

And for any wilful or knowing violation of any rule, regulation, condition or order made by the Commission any person may be punished by a fine not exceeding $500 per day for each and every day during which the offense occurs, Section 316(a) and (b) (16 U. S. C. A. Sec. 825o(a) and (b)).

ordered the company to show cause why it should not be required to file responses to the orders served upon it. The Rochester Telephone Company answered and took the position that it was outside the requirements of the Federal Communications Act in the matters concerning which the Commission attempted to impose its jurisdiction. The Commission determined that the Rochester Telephone Corporation was under the "control" of the New York Telephone Company and therefore was not entitled to the classification of a mere connecting carrier under Section 2(b) (2) of the Act (47 U. S. C. A. Sec. 152(b) (2)). The Rochester Telephone Company filed a bill in the District Court seeking to have the orders of the Commission set aside and annulled. The District Court held that that company did not come within the exception set forth in Section 2(b)-(2) of the Act and it appealed.

The Supreme Court by Mr. Justice Frankfurter discussed the procedural problems involved in appeals from "negative" orders or orders *vel non*, dividing, pp. 129, 132, the prior decisions involving "negative" orders into three categories. We are interested in the second of these categories because the orders therein bear an analogy to the "Determination by the Commission" at bar. That second category is: Where the action of the Commission sought to be reviewed declines to relieve the complainant from the command of a statute forbidding or compelling conduct on his part. As as example Mr. Justice Frankfurter cites, "* * * A denial of permission by the Interstate Commerce Commission for a departure from the long-short haul clause." The second group "* * * is composed of instances of statutory regulations which place restrictions upon the free conduct of the complainant."

[fol. 1132] The complainant may rid himself of these restrictions by asking the Commission to place him outside of the statute or, if within the terms of the statute, he may invoke the dispensing power of the regulatory body. In the latter situation the complainant, seeking a judicial review to rid himself of adverse action by the Commission, must clear the three hurdles of the existence of a case or controversy under Article III of the Constitution, "the conventional requisites of equity jurisdiction; [and] the specific terms of the statute granting to the district courts jurisdiction in suits challenging 'any order' of the Commission." If he can clear these hurdles he reaches his goal, the

jurisdiction in the reviewing court, to hear his appeal. In the case at bar the three hurdles have been removed by the specific review provisions of Section 313(b) of the Federal Power Act. The "Determination by the Commission" at bar is analogous to the orders in the second group described by Mr. Justice Frankfurter, orders imposing statutory obligations and prohibitions and it should follow that this court has jurisdiction to review the action of the Federal Power Commission which makes Jersey Central subject not only to statutory regulations which interfere with its freedom of conduct but compel specific actions by the Company and prohibit other actions by it.

In the case of Federal Power Commission v. Pacific Co., 307 U. S. 156, the question was presented as to whether an order of the Commission denying an application under Section 203(a) of the Act, the very section which the Commission invoked in the case at bar, was reviewable under Section 313(b). The facts were as follows. Two operating power companies filed a joint application under Sections 8 and 203 of the Act (16 U. S. C. A. Secs. 801 and 824b(a)), proposing to transfer all of the assets including licenses from one company to the other, terminating the existence of the first company. The Federal Power Commission found that the applicants had failed to establish that the proposed transfer would "* * * be consistent with the public interest within the contemplation of Section 203(a) [fol. 1133] of the Federal Power Act * * *" and denied the application. The power companies sought a review of the Board's order before the Circuit Court of Appeals for the Ninth Circuit and the Commission challenged the jurisdiction of that court by a motion to dismiss the petition on the ground that the court was without jurisdiction under Section 313(b) because the order of which review was sought was a negative order.

The Supreme Court, ruling that the order complained of was reviewable, p. 159, stated that if the Federal Power Act had included the provisions of the Urgent Deficiencies Act pertaining to reviews of orders of the Interstate Commerce Commission, the decision of the Supreme Court in the Rochester Telephone Corporation case would sustain the assumption of jurisdiction by the circuit court of appeals. Mr. Justice Frankfurter said, "But the Power Act contains a distinctive formulation of the conditions under which resort to the courts may be made and Congress determines the

scope of jurisdiction of the lower federal courts." Referring to Section 313(b), the Supreme Court concluded that the denial of the power companies' application by the Commission as not consistent with the public interest, was an order; that the petitioners were aggrieved by it since without such approval the transfer was forbidden. "Thus," said the Supreme Court, "the statutory scheme of the Power Act only reinforced the analysis made in the Rochester case."

The determination by the Commission that the acquisition of stock of Jersey Central by Jersey Power was in violation of Section 203(a) of the Act is paralleled by the order of the Commission denying the application of the power companies in the Pacific Power & Light Co. case. In the instant case the Commission viewed what had been done in retrospect and in effect forbade it. In the Pacific Power & Light Co. case the Commission viewed what was contemplated and ordered the power companies not to carry out the transfer of assets. In the instant case the Commission found Jersey Central to be a public utility within the meaning of Section [fol. 1134] 201 and thereby imposed upon Jersey Central the burden of complying with the provisions of the Act.

We conclude therefore that we have jurisdiction to review the Determination by the Commission. Compare Canadian River Gas Co. v. Federal Power Commission, 110 F. (2nd) 350, 113 F. (2nd) 1010, cert. den. 311 U. S. 693.

Is Jersey Central a Public Utility Within the Meaning of Section 201 of the Act?

Section 201(e) of the Federal Power Act (16 U. S. C. A. Sec. 824(e)) defines the term "public utility" when used in Parts II and III as "• • • any person who owns or operates facilities subject to the jurisdiction of the Commission under this Part." To determine whether Jersey Central is a public utility within Section 201(e), it is necessary to determine the meaning of the word "facilities" as used in that subsection; that is to say, it is necessary to determine the existence or non-existence of "facilities" subject to the jurisdiction of the Commission. Section 201(b) (16 U. S. C. A. Sec. 824(b)) provides that the provisions of Part II shall apply to the transmission or sale at wholesale of electricity in interstate commerce "• • • but shall not apply to any other sale of electric energy • • • ". The subsection then goes on to provide that the

Commission shall have jurisdiction * * * over all facilities for such transmission or sale of electric energy, but shall not have jurisdiction, except as specifically provided in this Part and the Part next following over facilities used for the generation of electric energy or over facilities used in local distribution or only for the transmission of electric energy in intrastate commerce, * * *". Section 201(c) (16 U. S. C. A. Sec. 824(c)) provides that for the purpose of Part II, * * * electric energy shall be held to be transmitted in interstate commerce if transmitted from a state and consumed at any point outside thereof; * * *".

The Commission takes the position that Jersey Central owns and operates "facilities" subject to its jurisdiction [fol. 1135] because Jersey Central transmits electricity from its South Amboy generating plant through the line owned by it, seven-eighths of a mile long, which connects at the south bank of the Raritan River with the line of Public Service which runs into the Mechanic Street Substation and is attached to the bus-bar which distributes current to the Staten Island Company. Therefore, say the Commission, Jersey Central is a public utility within the meaning of Section 201(e).

The petitioners lay emphasis on the provisions of Section 201(a) (16 U. S. C. A. 824(a)) which contains the declaration of policy embraced by Congress in passing the Federal Power Act. That Section provides: "It is hereby declared that the business of transmitting and selling electric energy for ultimate distribution to the public is affected with a public interest, and that Federal regulation of matters relating to generation to the extent provided in this Part and the Part next following and of that part of such business which consists of the transmission of electric energy in interstate commerce and the sale of such energy at wholesale in interstate commerce is necessary in the public interest, such Federal regulation, however, to extend only to those matters which are not subject to regulation by the States." Jersey Central takes the position that all phases of the conduct of its business properly are subject to regulation by the State of New Jersey and that the New Jersey statute regulating Public Utilities (R. S. 1937, 48:2-13) is entirely sufficient to control and regulate Jersey Central. That company lays particular emphasis on Section 204(f) (16 U. S. C. A. 824c (f)) which provides that "The provi-

sions of this section shall not extend to a public utility organized and operating in a State under the laws of which its security issues are regulated by a State Commission."

Jersey Central points out that the Commission finds that because the electricity which moves between the Staten Island Company and Public Service is in interstate commerce, the facilities of Jersey Central which conduct that electricity to Public Service are in interstate commerce, [fol. 1136] though wholly within the State of New Jersey and functioning solely by reason of a contract between Jersey Central and Public Service for the delivery of electricity from the former company to the latter within the State of New Jersey. This conclusion, says Jersey Central, "* * * is based solely on insignificant and relatively infrequent but wholly uncontrolled occasions when energy of Jersey Central is found in the Staten Island facilities." Both petitioners contend that the Federal Power Act was not intended to include within the jurisdiction of the Commission such a facility as Jersey Central's short line and state that it is an absurdity to bring within federal jurisdiction a generating company whose electricity happens to flow across a state border into the system of a neighboring company. It is, of course, beyond dispute that Jersey Central itself sells no electricity directly in interstate commerce. So far as this record shows, aside from its own local customers, Jersey Central sells electricity only to Public Service and delivers that electricity to Public Service wholly within the State of New Jersey. The jurisdiction of the Commission must rest upon Jersey Central's ownership and operation of facilities for transmission of electricity which flows under the Arthur Kill from New Jersey to Staten Island.

The petitioner, Jersey Power, lays emphasis also upon the legislative history of Parts II and III of the Act. It points out that the first bill introduced on the subject, S. 1725, 74th Cong., 1st Sess., February 6, 1935, provided by Section 201(a) that the provisions of the title should apply to the transmission and sale of electric energy in interstate commerce, to the production of energy for such transmission and sale, and that the Commission should have jurisdiction over "all facilities for such transmission, sale and/or production of energy by any means and over all facilities connected therewith as parts of a system of power transmission situated in more than one state * * *". Hon. Clyde

L. Seavey, Chairman of the House Committee on Interstate and Foreign Commerce, stated in respect to the House bill, "The new Title II of this Act is designed to secure [fol. 1137] coordination on a regional scale of the nation's power resources and to fill the gap in the present state regulation of electric utilities. It is conceived entirely as a supplement to, and not as a substitution for State Regulation." See Hearings on H. R. 5423 before the House of Representatives Committee on Interstate and Foreign Commerce, 74th Cong., 1st Sess. Part I, p. 384. As Jersey Power states, there was opposition to this bill and to the corresponding bill introduced in the Senate. The opposition took the position that proposed legislation should be confined to matters beyond the power of state regulatory agencies. See Hearings, Committee on Interstate and Foreign Commerce, House of Representatives, 74th Cong., 1st Sess., H. R. 5423, Part 3, p. 1623 ff. Thereafter the Senate Committee in charge of the legislation in that body reported out a new bill, S. 2796, Sections 201(a) and (b) of which were comparable to Section 201(a) of S. 1725. These new sections declared the business "• • • of generating, transmitting, and selling electric energy for ultimate distribution to the public is affected with a public interest", and declared also that federal regulation of the transmission and sale of electric energy in interstate commerce "and [of] the generation of electric energy for such transmission and sale • • •" was necessary in the public interest. Subsection (a) of the new Senate bill further stated that it was the policy of Congress to extend federal regulation to those matters which could not be regulated by the states and to assist the states in the exercise of their regulatory powers without impairing or diminishing the authority of any state commission. Section 201(b) of S. 2796 provided that the provisions of Part II should be applied to the transmission of electric energy, to its sale at wholesale in interstate commerce, and, "to the production of electric energy for such transmission or sale." It stated that the Commission should have jurisdiction over all facilities "for such production, transmission or sale of electric energy by any means and over all facilities connected therewith as parts of a system of power transmission situated in more than one state, except facilities used only for the production or [fol. 1138] transmission of electric energy in intra state commerce or in local distribution • • •".

It is to be noted that in S. 2796 there were inserted for the first time provisions protecting the regulatory powers of the states. Generating facilities employed for the creation of electricity to be used in interstate commerce remained subject to the Commission's jurisdiction as did all facilities connected with such generating facilities as parts of interstate transmission systems.

In the report of the Committee on Interstate Commerce submitted to the Senate by Senator Wheeler (See S. Rep. No. 621, 74th Cong., 1st Sess. pp. 17, 18 and 19) it is stated; "The new part 2 of the Federal Water Power Act would constitute the first assertion of Federal jurisdiction over this major interstate public utility. The decision of the Supreme Court in Public Utilities Commission v. Attleboro Steam & E. Co. (273 U. S. 83) placed the interstate wholesale transactions of the electric utilities entirely beyond the reach of the States. Other features of this interstate utility business are equally immune from State control either legally or practically.

* * * * * * * * *

"* * * The revision has also removed every encroachment upon the authority of the States. The revised bill would impose Federal regulation only over those matters which cannot effectively be controlled by the States. The limitation on the Federal Power Commission's jurisdiction in this regard has been inserted in each section in an effort to prevent the expansion of Federal authority over State matters * * *"

Thereafter in the House of Representatives alterations were insisted upon and Sections 201(a) and (b) of the Act were set forth substantially in their present form. It will be noted that in the House amendments jurisdiction of the Commission over generating facilities and "facilities connected therewith as parts of a system of power transmission situated in more than one state" were not expressly included.

[fol. 1139] The report accompanying the bill in the House (74th Cong., 1st Sess. House Report No. 1318) offered by Representative Rayburn, states, pp. 7 and 8: "The new parts are designed to meet the situation which has been created by the recent rapid growth of electric utilities along interstate lines. The percentage of electric energy generated in the United States that was transmitted across State lines increased from 10.7 in 1928 to 17.8 in 1933. The amount of energy transmitted in interstate commerce in

1933 was greater than all of the energy generated in the country in 1913. Under the decision of the Supreme Court of the United States in Public Utilities Commission v. Attleboro Steam & E. Co. (273 U. S. 83), the rates charged in interstate wholesale transactions may not be regulated by the States.

* * * * * * *

"The bill takes no authority from State commissions and contains provisions authorizing the Federal Commission to aid the State commissions in their efforts to ascertain and fix reasonable charges. Provision is made for joint boards composed of members of State commissions which may be used for this purpose. The new parts are so drawn as to be a complement to and in no sense a usurpation of State regulatory authority and contain throughout directions to the Federal Power Commission to receive and consider the views of State commissions. Probably, no bill in recent years has so recognized the responsibilities of State regulatory commissions as does title II of this bill."

The statement of the House Conferees accompanying the Conference Report upon S. 2796 offered by Representative Rayburn, Chairman of the House Conferees, (74th Cong., 1st Sess., House Report No. 1903, p. 74) says, "The Senate bill in section 201(a) contained a somewhat more lengthy declaration of policy than the House amendment, the only material difference being that the House amendment contained no reference to 'generation' of electric energy which appeared in the Senate bill. The conference substitute follows the language of the House amend- [fol. 1140] ment but inserts a clause relating to generation to the extent regulation thereof is provided for in this part and the part next following. The House amendment and conference substitute also makes reference to the 'sale of electric energy at wholesale in interstate commerce' which reference did not appear in the Senate bill. The same general differences between the Senate bill and the House amendment also appear in section 201(b) and the language of the House amendment has been followed with a clarifying phrase added to remove any doubt as to the Commission's jurisdiction over facilities used for the generation and local distribution of electric energy to the extent provided in other sections of this part and the part next following."

As we have said Section 201(a) of the Act states ex-

plicitly that the federal regulation proposed by the Act is intended "to extend only to those matters which are not subject to regulation by the states", and that Section 201(b) says with equal clarity that the Commission "shall not have jurisdiction * * * over facilities used for the generation of electric energy or over facilities used in local distribution or only for the transmission of such electric energy in intrastate commerce, * * *." Generation of electricity, its local distribution or its transmission in intrastate commerce are not within the purview of the Act or the jurisdiction of the Commission. But the contentions of the petitioners in respect to the effect of the legislative history of Part II lose much of their potency when we contemplate the provisions of Section 201(c) which state that electricity shall be held to be transmitted in interstate commerce if transmitted from a state and consumed outside that state. Section 201(c) of the Act was in the original bill submitted to the Senate and the House of Representatives and came into the law substantially without change. That section fits well into the law as laid down by the decision of the Supreme Court in Public Utilities Comm. v. Attleboro Steam and Electric Co., 273 U. S. 83, and takes away, we think, the force of the argument of unconstitutionality made on behalf of the petitioners, at least insofar as the application of Section 201 of the Act to Jersey Central [fol. 1141] is concerned. The provisions of Part II were intended by Congress to be applied only to electrical energy transmitted in interstate commerce and in this field there can be no doubt that Congress possesses the constitutional right to legislate. See Northern Securities Company v. United States, 193 U. S. 197.

It follows that what we are concerned with in the appeals at bar is ascertaining the intention of Congress. We think that Congress intended to impose regulation upon those public utilities which operate facilities for the transmission of electricity in interstate commerce, transmission in interstate commerce being defined as electricity transmitted from a state and consumed at any point outside its borders.

An objection raised by the petitioners to the jurisdiction of the Commission lies in the small quantities of electricity which pass from Jersey Central's generating plant at South Amboy through the Public Service bus-bar into the lines of the Staten Island Company and the fact that this

electricity was not paid for by any consideration passing from the Staten Island Company to Jersey Central. There were no commercial transactions whatsoever between the Staten Island Company and Jersey Central. Jersey Power takes the position that insofar as economy-flow current passed between Jersey Central and Public Service on the one hand and Public Service and Staten Island on the other, the respective arrangements for this current had no relation to or effect upon the non-participating company and that Jersey Central supplied only such current as Public Service otherwise would generate for its own use.

Some part of the electricity passing from the Jersey Central system to the Public Service system moved in interstate commerce and reached the Staten Island Company. That electric energy was transmitted in interstate commerce within the meaning of Section 201(e) if the words of the subsection be applied literally. The facilities of Jersey Central were in fact employed for this transmission. This was not an accident. Once the circuit between the Jersey Central generating plant and the Staten Island Company [fol. 1142] was closed, inevitably electricity flowed from Jersey Central to the Staten Island Company. That result was not only not unexpected, it was unavoidable. The fact that Jersey Central sold this electricity to Public Service rather than to Staten Island does not serve to put the flow out of commerce. Once electricity flowed from the Jersey Central generating plant to the Staten Island Company, commercial transactions between the three companies under their respective contractual relations and arrangements followed. This was interstate commerce within the meaning of the Commerce Clause. For an analogy see the decisions of the Supreme Court in Eureka Pipe Line Company v. Hallanan, 257 U. S. 265, and United Fuel Gas Co. v. Hallanan, 257 U. S. 277. We do not think that it is important that the electricity which was transmitted is designated as emergency, economy-flow, incidental or slop-over current. It is electricity which is transmitted from New Jersey to New York when circuits are closed. We conclude, therefore, that the transmission of current which reached the Staten Island Company by Jersey Central over its facilities was such transmission as is described in the second sentence of Section 201(b). It follows that Jersey

Central is a public utility within the meaning of Section 201(e) of the Act.

As we have indicated it was the intention of Congress in passing Part II of the Act to extend federal regulation to the transmission of electricity in interstate commerce. But by Section 201(a) Congress made it plain that such regulation was to extend only to those matters which were not subject to regulation by the states. The petitioners point out that the transfer of stock with which we are concerned was approved by the Board of Public Utility Commissioners of New Jersey in the exercise of the authority granted to the Commissioners by the law of New Jersey, R. S. 1937, 48:2-13.

The sale of the Jersey Central stock to Jersey Power properly was subject to regulation by the State of New Jersey because Jersey Central was engaged in intrastate commerce in that it supplied electricity to local consumers [fol. 1143] within the State of New Jersey. The sale was subject to the jurisdiction of the Federal Power Commission because Jersey Central is a public utility within the meaning of Section 201(e). We must consider the point of dual control but only insofar as it may be applicable to the appeals at bar, in view of the provisions of Section 201(a) restricting federal regulation, and the legislative history of Part II of the Act. The authority of the Board of Public Utility Commissioners of New Jersey must be deemed to be paramount in those matters which may affect the intrastate transmission of electricity and the authority of the Federal Power Commission must be deemed to be governing as to those matters which may affect the transmission of electric energy in interstate commerce. We cannot presume a conflict between the two regulatory bodies upon the issue of whether or not Jersey Power should have bought the stock of Jersey Central. No conflict is shown upon the present record and none may ever come into existence.

The determination of the Commission is affirmed.

A true Copy:
Teste:

——— ———, Clerk of the United States Circuit Court of Appeals for the Third Circuit.

[fol. 1144] IN THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE THIRD CIRCUIT

No. 7256

JERSEY CENTRAL POWER & LIGHT COMPANY, Petitioner,

vs.

FEDERAL POWER COMMISSION, Respondent

This cause came on to be heard on the transcript of record from the Federal Power Commission, and was argued by counsel.

On consideration whereof, it is now here ordered, adjudged and decreed by this Court that the determination of the said Federal Power Commission in this cause be, and the same is hereby affirmed.

John Biggs, Jr., Circuit Judge.

May 25, 1942.

Endorsements--Order Affirming Determination of the Federal Power Commission. Received & Filed May 25, 1942. Wm. P. Rowland, Clerk.

[fol. 1145] IN THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE THIRD CIRCUIT

No. 7257

NEW JERSEY POWER & LIGHT COMPANY, Petitioner,

vs.

FEDERAL POWER COMMISSION, Respondent

This cause came on to be heard on the transcript of record from the Federal Power Commission, and was argued by counsel.

On consideration whereof, it is now here ordered, adjudged and decreed by this Court that the determination of the said Federal Power Commission in this cause be, and the same is hereby affirmed.

John Biggs, Jr., Circuit Judge.

May 25, 1942.

Endorsements—Order Affirming Determination of the Federal Power Commission. Received & Filed May 25, 1942. Wm. P. Rowland, Clerk.

[fol. 1146] IN THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE THIRD CIRCUIT

No. 7256. October Term, 1939

JERSEY CENTRAL POWER & LIGHT COMPANY, Petitioner,

vs.

FEDERAL POWER COMMISSION, Respondent

No. 7257. October Term, 1939

NEW JERSEY POWER & LIGHT COMPANY, Petitioner,

vs.

FEDERAL POWER COMMISSION, Respondent

ORDER

CORAM: Biggs, Maris and Goodrich, Circuit Judges

And now, to wit, this 11th day of July, 1942,

It is ordered that the opinion filed herein on May 25, 1942 be and the same hereby is amended by striking from the third line of the second paragraph on page 2 of the printed copy thereof the letter "1" following the figure "5"; and by striking the letter "c" from the parentheses following the figure "1" in the third line of page 25 of the printed copy of the opinion and substituting in lieu thereof the letter "e".

For the Court.

John Biggs, Jr., U. S. Circuit Judge.

Order Amending Opinion. Received & Filed July 11, 1942.

Wm. P. Rowland, Clerk.

[fol. 1147] UNITED STATES OF AMERICA,
Eastern District of Pennsylvania,
Third Judicial Circuit, sct.:

I, Wm. P. Rowland, Clerk of the United States Circuit Court of Appeals for the Third Circuit, do hereby certify the foregoing to be a true and faithful copy of the original Transcript of record (Volume II) and proceedings in this Court in the cases of Jersey Central Power & Light Company, Petitioner, vs. Federal Power Commission, Respondent, No. 7256; New Jersey Power & Light Company, Petitioner, vs. Federal Power Commission, Respondent, No. 7257, on file, and now remaining among the records of the said Court, in my office.

In testimony whereof, I have hereunto subscribed my name and affixed the seal of the said Court, at Philadelphia, this 30th day of July in the year of our Lord one thousand nine hundred and forty-two, and of the Independence of the United States the one hundred and sixty-seventh.

Wm. P. Rowland, Clerk of the U. S. Circuit Court of Appeals, Third Circuit. (Seal.)

[fol. 1148] SUPREME COURT OF THE UNITED STATES, OCTOBER TERM, 1942

No. 299

ORDER ALLOWING CERTIORARI—Filed October 12, 1942

The petition herein for a writ of certiorari to the United States Circuit Court of Appeals for the Third Circuit is granted.

And it is further ordered that the duly certified copy of the transcript of the proceedings below which accompanied the petition shall be treated as though filed in response to such writ.

[fol. 1149] SUPREME COURT OF THE UNITED STATES, OCTOBER TERM, 1942

No. 329

ORDER ALLOWING CERTIORARI—Filed October 12, 1942

The petition herein for a writ of certiorari to the United States Circuit Court of Appeals for the Third Circuit is granted.

And it is further ordered that the duly certified copy of the transcript of the proceedings below which accompanied the petition shall be treated as though filed in response to such writ.